



ANNUAL *report* 2018

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The AHEC program was developed by Congress in 1971 and there are 56 AHEC programs and 235 centers in 48 U.S. states and territories. Arizona's first regional center opened in Nogales in 1984. Today, five regional centers are serving Arizona by supporting health professions education, providing continuing education for health professionals, and addressing health disparities and local health workforce issues. Our programs support development of our children, our health professions students and our health professions workforce as well as recruitment and retention of a highly skilled health professions workforce. The regional centers also support many health careers programs including students in medicine (both allopathic and osteopathic medical students), nursing, pharmacy, public health, dentistry and allied health.

Arizona AHEC Program Mission Statement

To enhance access to quality health care, particularly primary and preventive care, by improving the supply and distribution of health care professionals through academic community educational partnerships in rural and urban medically underserved areas.

Program Highlights

Rural and Urban Underserved Field Experiences for Health Professions Trainees

During the period of July 1, 2017-June 30, 2018, the Arizona AHEC supported the following:

Academic Discipline/Program	# Trainees	# Field Experiences
Dentistry and Dental Hygiene	59	67
Medical Residency	45	62
Medical School	208	509
Nurse Practitioner	95	186
Nursing or Medical Assistant	94	95
Pharmacy School	246	377
Physical and Occupational Therapy	1	1
Physician Assistant	48	59
Public Health	190	219
Registered Nurse, Nurse Anesthetist, Nurse Midwife, or Other Nurse	67	125
Social Work and Behavioral Health	5	5
Other Allied Health	139	140
Other Undergraduate Health-related Disciplines	33	36
TOTAL*	1,230	1,881

**Of this total, 772 field experiences were reported by the Rural Health Professions Programs—at the University of Arizona (UA), Arizona State University, and Northern Arizona University—and other supported UA health professions training programs.*

Pre-collegiate (K-12) Health Career Preparation Programs in Rural and Urban Underserved Areas

Total of 7,027 K-12 students and adult participants*

**Nearly 1,200 K-12 students participated in 57 health career preparation clubs across all regional centers. Additionally, over 5,800 students and adults participated in other health career events. Adult participants included parents, teachers, and interested community members. The adults represented joint participation. See the regional centers' reports for example activities.*

Continuing Education for Health Professionals

Total of 8,189 participants

Participants at 189 continuing education events included physicians, dentists, public health professionals, pharmacists, nurse practitioners, registered nurses, physician assistants, and allied health professionals.

Research and Project Grants for Students, Faculty and Community Organizations

▶ 6 new grants ▶ 3 continuing grants ▶ 9 completed grants

AzAHEC is a sponsored project of the University of Arizona. The AzAHEC program office is located at the University of Arizona Health Sciences (pictured).



“Community-based, transformative learning experiences are at the heart of the UA health sciences curriculum. AzaAHEC is an exceptional example of the work being done within our health sciences colleges and through regional partnerships in service to our state. From improving the quality of health care in rural and underserved communities to experiential training that enhances our healthcare workforce, they are successfully addressing the region’s educational and health care needs.”

– **Michael D. Dake, MD**
Senior Vice President for Health Sciences



Message from the Director



Sally J. Reel, PhD, RN, FNP, FAAN

*Associate Vice President for
Community Engagement*

*Director, Arizona Area Health
Education Centers*

*University Distinguished
Outreach Professor*

Clinical Professor of Nursing

I am pleased to introduce the 2018 Arizona Area Health Educations Centers (AzaAHEC) Annual Report. AzaAHEC began serving Arizona in 1984 and continues to support health professions workforce development for our rural and urban underserved communities today. This report highlights our achievements particularly with improving the quality and supply of health professionals serving Arizona communities through community-based clinical and experiential training.

This year I am especially pleased to introduce the launch of the Arizona AHEC Scholars Program. The AHEC Scholars Program (ASP) is a new, two-year interprofessional program comprised of community-based

experiential training conducted in rural and/or underserved settings within the Arizona AHEC’s regional centers. The ASP builds from the Rural Health Professions Program (RHPP) (see page 7). AHEC Scholars are selected by their respective college and must be RHPP students in good standing. Fifty-three students comprise the inaugural class of AHEC Scholars. Participating colleges and universities include the RHPP programs of Arizona State University (nurse practitioner program), the Northern Arizona University (nurse practitioner program), and the University of Arizona Colleges of Medicine (Phoenix and Tucson) (medical students), College of Nursing (nurse practitioner program), College of Pharmacy (PharmD program), and the Mel and Enid Zuckerman College of Public Health (masters and doctor of public health programs). Faculty for this program is comprised of teachers from the three state

universities as well. The students are assigned to teams (one team per regional AHEC center) and each team is comprised of students from the seven participating colleges and three state universities so they learn about each other as well as learn from each participating university.

By background, the ASP is a new program that is supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA) and the Arizona Area Health Education Centers. HRSA required federally funded AHEC programs across the nation to develop and implement ASPs as a condition of award during the funding years 2017-2022. ASPs differ across the nation; however, a unifying focus is enhancing the education of health professions students who are interested in gaining greater knowledge about rural and urban underserved communities. By definition, the ASP is a longitudinal program with interprofessional curricula with specific didactic and community-based training activities focusing on rural and/or urban underserved Arizona communities. Required core topics include interprofessional education, behavior health, social determinants of health, cultural competency, practice transformation and current and emerging health issues.

For Arizona, the ASP curriculum content was collaboratively developed among the RHPP Directors and the Regional AHEC Directors. Prior to HRSA requiring such a program the RHPP directors began to develop an interprofessional component of advanced learning for the RHPP programs. They were well-poised to implement the AHEC Scholars program as curriculum was already underway when the requirement to development was announced. AHEC Scholars complete 40 hours of didactic and 40 hours of community-based training each year for two years. Fundamentally, the ASP enhances students’ RHPP experience by providing an advanced, team-based and community-based experiential training program. The goal of the Arizona ASP is for students to acquire deep knowledge about Arizona’s rural and underserved populations and communities specifically through team-based educational innovations. Students learn about rural

and medically underserved populations and communities from multiple disciplinary and community perspectives and learn to contribute meaningfully as members of interprofessional teams collaborating with an assigned regional AHEC center.

Conceptually, transformative learning as described by the Institute of Medicine Committee on Educating Health Professionals to Address the Social Determinants of Health's (SDOH) framework for lifelong learning for health professionals in understanding and addressing the social determinants of health will guide community-engaged learning for AHEC Scholars. Core components of transformative learning include experiential learning, collaborative learning, integrated curriculum, and continuing professional development. These components are embedded in the ASP curriculum.¹

The ASP learning model also is based on progressive learning building through four interrelated phases inclusive of introduction to rural and medically underserved communities (MUC), immersion in select rural and MUCs, integration of select principles of rural and MUCs practice and informed dissemination. Introduction is designed to rapidly familiarize students to the basic concepts and vocabulary about rural and MUCs, team-based learning and collaborative practice, core concepts underpinning the program, and strategies to succeed in the ASP.

Immersion involves direct engagement with select populations within the students assigned regional AHEC center. Populations may include individual patients, families and/or communities and recognizes variations and unique characteristics of Arizona's communities and regional AHEC centers. Learning activities are designed to provide a broad range of engagement within the communities and foster team-based, collaborative interactive work to assess and work on select problems identified within their population of interest. Students learn about and with each other as well as community partners. Learning is a hands-on experience where students work as a team and apply theoretical knowledge to assess their population of interest. Students stay in the same team cohort and community throughout the duration of their program.

Integration involves student teams working together on a hands-on scholarly project identified from their population of interest and assessment activities. Select seminars will focus on methodologies relevant for the projects. These projects are designed with relevance to the communities, expand the experience and competencies of the students, have potential to transform community practice as well as influence practice



AHEC Scholar Fellows enjoying their community immersion in the EAHEC region.

location choice after graduation. Integration is designed to empower students and involves synthesizing content, teaching, learning, and knowledge about rural and MUC, as well as outreach and community engagement to prepare graduates with practice-ready team-based skills to effectively work with rural and MUCs.

Finally, informed dissemination prepares students with skills to present and disseminate their work to professional and community-based audiences. During the first year of their program student teams may present a poster of their work at the annual Interprofessional Rural Health Professions Program conference. During the second year of their program student teams are required to do an oral presentation of their scholarly project at the Interprofessional Rural Health Professions Program conference as well as their regional AHEC center constituents.

You will see comments in the regional centers reports about the AHEC Scholars Program launch. We want to congratulate everyone involved for the successful launch of this program and look forward to seeing the students' progress and look forward to sharing details next year in our 2019 annual report.

In conclusion, the 2018 Annual Report provides snapshots of health professional workforce training programs conducted throughout the AzaAHEC system including rural, urban underserved, border and tribal communities and in collaboration with our health professions colleges and schools. I am pleased to present this 2018 report for your review.

¹ National Academies of Sciences, Engineering, and Medicine. (2016). *A framework for educating health professionals to address the social determinants of health*. Washington, DC: The National Academies Press. doi: 10.17226/21923.

Arizona AHEC Rotations by Trainee Institution 7/1/17 – 6/30/18

INSTITUTION	CENTER REPORTED ROTATION HOURS						% to all center hours
	EAHEC	GVAHEC	NAHEC	SEAHEC	WAHEC	Grand Total	
A. T. Still University	2,080	2,546	28,260	2,880	0	35,766	25.00%
Arizona Medical Training Institute	24	0	0	0	0	24	0%
Arizona State University (ALL)	224	1,354	334	855	620	3,387	3.00%
Arizona Western College	0	0	0	0	8	8	0%
Brigham Young University	0	260	0	0	0	260	0.20%
Central Arizona College	1,304	0	0	0	0	1,304	0.92%
Chamberlain College of Nursing	0	0	375	0	630	1,005	0.71%
Chandler Gilbert Community College	0	917	0	0	0	917	0.64%
Chatham University	0	0	0	0	940	940	0.66%
Coconino Community College	0	0	320	0	0	320	0.22%
College of Health Careers	0	0	0	0	15,070	15,070	11.00%
Eastern Arizona College	4,887	0	0	0	0	4,887	1.20%
Eastern Kentucky University	0	0	180	0	0	180	0.12%
Frontier Nursing University	0	0	0	0	530	530	0.37%
Georgetown University	0	0	500	0	0	500	0.35%
Gila Community College	608	0	160	0	0	768	0.53%
Grand Canyon University	240	150	1,087	0	0	1,477	1.03%
Icahn School of Medicine at Mt. Sinai	0	0	0	598	0	598	0.42%
Iowa State University	0	320	0	0	0	320	0.22%
Marquette University	240	0	0	0	0	240	0.16%
Marshall B Ketchum University	0	0	480	0	0	480	0.33%
Maryville University	0	0	160	0	0	160	0.11%
Midwestern University	80	672	1,040	4,960	0	6,752	5.00%
Mohave Community College	0	0	180	0	0	180	0.12%
My Dental Assisting Institute	120	0	0	0	1,940	2,060	1.50%
Northern Arizona University (ALL)	960	2,088	25,557	3,752	0	32,357	23.00%
Northland Pioneer College	0	0	160	0	0	160	0.11%
Paradise Valley Community College	0	315	0	0	0	315	0.22%
Purdue University Global	0	200	0	0	0	200	0.14%
Residency Programs	760	0	0	600	80	1,440	1.00%
University of Arizona (ALL)	597	3,193	3,763	19,711	1,220	28,484	21.00%
University of Minnesota	0	200	0	0	0	200	0.15%
University of Northern Colorado	0	32	0	0	0	32	0%
University of Phoenix	0	0	0	0	195	195	0.13%
Walden University	144	0	310	0	240	694	0.50%
Zürcher Hochschule für angewandte Wissenschaften (Zhaw)	0	0	80	0	0	80	0%
GRAND TOTAL	12,268	12,247	62,946	33,356	21,473	142,290	

Arizona AHEC Rotation Hours, Number of Rotations and Number of Trainees, 7/1/17 – 6/30/18

Location	CENTER REPORTED HOURS, ROTATIONS, TRAINEES		
	Total Rotation Hours	Number of Rotations	Total Trainees
EAHEC	12,268	140	82
Community Based Clinical and Experiential Training	11,831	132	
Non-Clinical Community Training	437	8	
GVAHEC	12,247	95	95
Community Based Clinical and Experiential Training	10,688	68	
Non-Clinical Community Training	1,559	27	
NAHEC	62,946	477	242
Community Based Clinical and Experiential Training	61,976	474	
Non-Clinical Community Training	970	3	
SEAHEC	33,356	211	193
Community Based Clinical and Experiential Training	32,396	183	
Non-Clinical Community Training	960	28	
WAHEC	21,473	237	222
Community Based Clinical and Experiential Training	21,473	237	
Non-Clinical Community Training	0	0	
TOTAL CENTERS	142,290	1,160	834

Program Overview

About the Arizona AHEC Program

1. Started in 1984 with the formation of the first regional center in the border town of Nogales, 13 years after the United States Congress developed the nationwide AHEC system to recruit, train and retain a health professions workforce committed to helping underserved populations
2. Expanded statewide by 1989 to include five regional centers serving all 15 Arizona counties
3. Is a sponsored project of the University of Arizona
4. Is cited in Arizona Revised Statutes (ARS) § 15-1643, § 15-1644, § 15-1645 and § 5-572 (C)
5. Operates with funds from federal and state sources

Structure

The Arizona AHEC Program comprises five regional centers located strategically statewide and an administering “home” office based at the University of Arizona (UA). The centers carry out the program’s mission by creating, coordinating and implementing a scope of work designed to address the health professions education and training needs within their service regions.

The Arizona AHEC Program director consults regularly with two advisory committees: the Arizona Health Sciences AHEC Advisory Committee, whose members represent the UA Colleges of Medicine – Tucson and Phoenix, Nursing, Pharmacy and Zuckerman College of Public Health; and the Arizona AHEC Advisory Commission, who represent health educators, health professionals and community members serving and/or living in rural and urban medically underserved communities throughout Arizona.

In addition to these two advisory bodies, each regional center has its own governing board, comprised of health care providers and consumers who reflect the ethnic representation of the center’s geographic area.

Focus Areas 2017-2018

During the past year, the Arizona AHEC Program’s regional centers sustained and improved their statewide efforts to strengthen Arizona’s health professions workforce through a variety of activities targeting k-12 and post-secondary health professions students as well as health professionals across a wide range of disciplines. In addition, the regional centers supported many educational activities designed to promote health awareness throughout their communities.

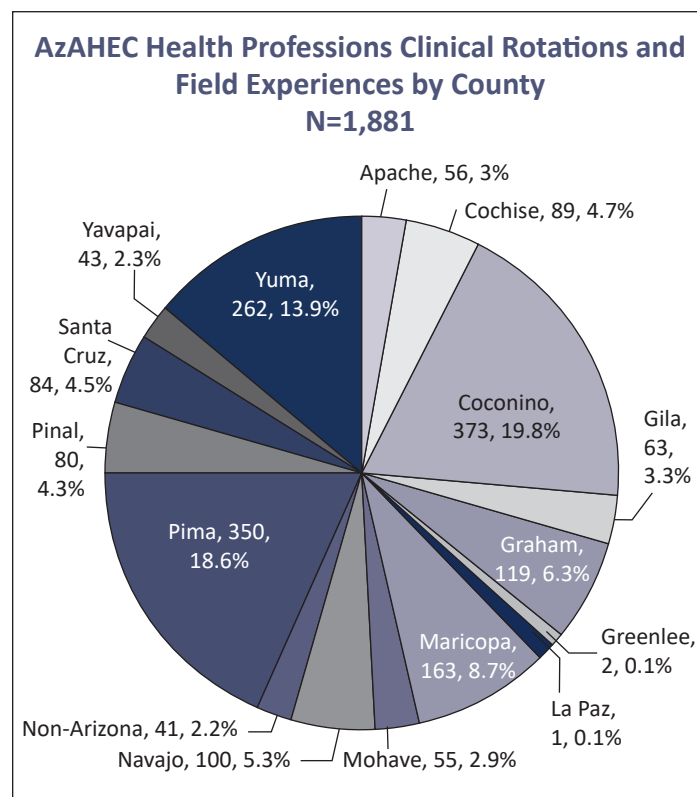
Health Professions Trainee Education: Trainees pursuing careers in the health professions benefited from AzaAHEC-supported clinical rotations and internships. The regional centers helped these trainees by providing them with in-depth orientations to the local communities. Some trainees also received funding

support for housing, travel and related expenses. These training opportunities are possible because of the guidance of dedicated and experienced preceptors and other healthcare providers as well as strong academic partnerships with Arizona’s colleges and universities. The Arizona AHEC Scholars Program (ASP), inaugurated in late Spring 2018, enhances this program by providing an advanced, interprofessional community-based experiential fellowship program of study in collaboration with each regional AHEC Center and participating RHPP programs. For further details, see RHPP description on page 7 and narrative reports from the centers and the RHPP programs.

Youth (K-12) Health Career Programs: The regional centers supported numerous activities through the year to introduce Arizona’s rural and underserved youth to health careers. Personnel at each center worked with local high schools to support health career clubs, Health Occupations Students of America (HOSA) chapters; and with the University of Arizona for the Border Latino and American Indian Summer Exposure to Research (BLAISER) and the Med-Start Health Careers Program.

Continuing Education for Health Professionals: The regional centers sponsored numerous continuing education opportunities throughout the year for health professionals statewide.

Community Health Promotion: In addition to helping build and support a culturally-competent health professions workforce, the regional centers coordinated and supported health education activities and events for their local communities.



Percentages are rounded to the nearest half percent.

Education and Training of Arizona's Health-Care Workforce:

Health-care providers of the future must be ready for team practice regardless of context. AzAHEC supports IPE on many levels, including rural health practice settings, classroom learning and research. Rural and medically underserved settings are rich contexts for IPE. Fundamentally, rural health settings have supported interdisciplinary training and practice for many years. Access to care for rural and underserved communities, health professional workforce shortages, and populations that need comprehensive care and prevention approaches have underpinned calls for team-based care for many years. Today, many of those initial drivers for team-based, interdisciplinary care underscore the need for a collaborative-practice-ready health-care workforce that provides quality, patient-centered care and integrated, comprehensive care coordination; ensures patient safety; achieves care value; manages population health and addresses health-care workforce shortages.

Preparation of the Arizona health-care workforce must emphasize rural, border and diversity issues as well as health disparities and social determinants of health. This context demands ensuring that medical, nursing, pharmacy, public health, allied health and other health-care professionals have educational experiences that prepare them for rural and urban medically underserved practice. Our participating colleges and programs have successful strategies to recruit students into rural practice preparation programs. Through the AzAHEC-supported Rural Health Professions Program (RHPP), our students are educated and trained in rural and urban medically underserved communities. Greater integration and formalization underpins current IPE strategies essential to preparing rural health providers to practice collaboratively in teams. Through partnership with our AzAHEC regional centers, we are piloting team-based rotations as well as using telehealth technologies to deliver real-time virtual simulation learning for students who are geographically dispersed. Through an all-program interprofessional approach, students learn how to practice culturally sensitive and competent care.

Interprofessional education (IPE) is foundational to improving health-care practice and patient care. IPE involves educators and learners from two or more health professions and their foundational disciplines who jointly create and foster a collaborative learning environment. In this environment, learners develop the competencies core to effective, collaborative, patient-centered practice that is focused on improving patient outcomes through evidence-based, quality-driven and technology-enabled methods. IPE aims to develop mutual

understanding of and respect for the contributions of various professions and disciplines, thus, socializing health-care providers to work together as a team; share problem-solving and decision-making responsibilities; and improve health care for patients, families and communities. AzAHEC is proud to serve as a partner in developing interprofessional education and practice models that effectively train our students to practice in teams within our communities.

RHPP Reported Rotations and Hours, 7/1/17 – 6/30/18

RHPP Program	Number of Rotations	Number of Rotation Hours
ASU College of Nursing & Health Innovation	38	7,590
NAU School of Nursing	21	4,198
UA College of Medicine – Phoenix	63	11,680
UA College of Medicine – Tucson	150	36,100
UA College of Nursing	83	8,160
UA College of Pharmacy	355	72,320
UA College of Public Health	62	2,600
Total RHPP	772	142,648

Arizona Rural Health Professions Program

The Arizona Rural Health Professions Program (RHPP) is a core program supported by AzaAHEC since FY 2007. The Arizona State Legislature created the RHPP in 1997 (ARS § 15-1754) to address shortages of health professionals in Arizona’s rural communities. The RHPP provides rural training experiences for students from the University of Arizona (UA), Arizona State University (ASU) and Northern Arizona University (NAU). Under legislation each year, the participating schools select 15 medical students from the UA College of Medicine, four pharmacy students from the UA College of Pharmacy and 10 nurse practitioner students—four from the UA, four from ASU and two from NAU—to participate in the RHPP. The RHPP is voluntary for student participation but mandatory for the three participating state universities. Beyond the statute, AzaAHEC also supports training experiences for public health students at the UA Mel and Enid Zuckerman College of Public Health.

The RHPP is central to the mission of AzaAHEC to help prepare the health-care workforce for practice in rural and urban underserved communities. While the RHPP statute addresses rural Arizona communities, AzaAHEC also supports training experiences in Arizona’s urban medically underserved communities in order to address primary care provider shortages in both rural and urban areas. Since AzaAHEC initiated financial support of the RHPP, the number of participating students has significantly increased above the statutory requirement, thus exposing a greater number of health professions students to the importance, unique challenges and professional rewards of rural and underserved practice. In 2017-18, the RHPPs at the UA, ASU and NAU reported a total of 772 training experiences.



AHEC Scholars at the orientation

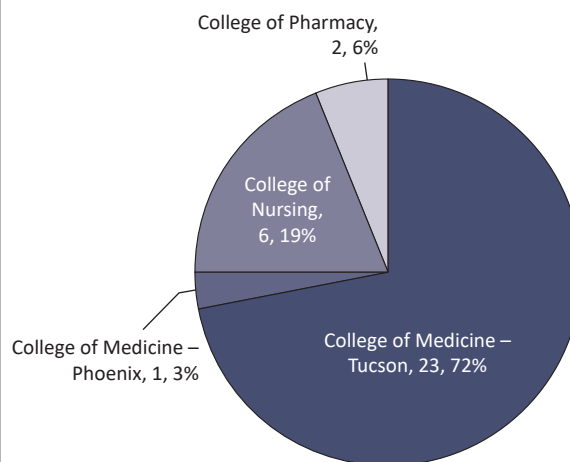
AZAHEC Scholars Program

The Arizona AHEC Scholars Program (ASP), inaugurated in late Spring 2018, provides an advanced, interprofessional community-based experiential fellowship program of student in collaboration with each RHPP program and each regional AHEC Center. To become an AHEC Scholar, Fellows apply into their participating college’s RHPP program, which is a two-year commitment minimum. Each RHPP program is responsible to recruit and select AHEC Scholars and evaluate outcomes. The goal of the program is for Fellows to acquire deep knowledge about rural and underserved populations and communities specifically through interprofessional and collaborative practice educational innovations. Fellows learn about rural and medically underserved populations and communities from multiple disciplinary and community perspectives and fellows learn to contribute meaningfully as members of the interprofessional team collaborating with an assigned regional AHEC center. ASP fellow teams develop skills to enhance ability to work collaboratively with members of the care team, rural patients, and rural and medically underserved communities.

Tuba City Housing

The AzaAHEC program as a sponsored project of the University of Arizona leases a modular home from the Tuba City Regional Health Care Corp. Housing Office. This increases the ability of UA students to have clinical rotations at Tuba City Regional Health Care Corporation. Since the inception of this program, 48 students have been accommodated. During 2017-18, 32 students were accommodated with housing and completed a total of 6,030 clinical training hours.

2017-2018 Tuba City Housing Students’ Degree Programs N=32 Students



This housing opportunity is a wonderful collaborative relationship that enhances AzaAHEC’s abilities to prepare practice-ready graduates to work interprofessionally in a tribal community.

In the following sections, participating colleges provide reports of their RHPPs. Additional highlights include our annual interprofessional RHPP conference; rural training tracks threaded across multiple opportunities, including medical residency training; and AzaAHEC-supported IPE events and research projects.

The University of Arizona College of Medicine – Tucson Rural Health Professions Program

Carlos R. Gonzales, MD, FAAFP

RHPP Director

Assistant Dean, Curricular Affairs

Associate Professor, Family and Community Medicine

The UA College of Medicine – Tucson (UA COM-T) RHPP continues to offer rural and urban underserved clinical rotations in family medicine, pediatrics, general surgery, internal medicine, medicine/pediatrics, and obstetrics/gynecology thanks to a dedicated network of volunteer physician preceptors throughout Arizona. Students have the opportunity to participate in these community-based rotations during the summer after their first year of medical school, as well as during their third and fourth years of medical school. An objective of the RHPP is for students to have a minimum of ten weeks of rural clinical training during their medical education at the UA COM – T. The college strives to place each RHPP student in a situation where she/he will have an opportunity for a longitudinal experience in the same location with the same preceptor, patients and community. By doing so, the student gets to know the community, its benefits and attractions, as well as its socioeconomic, rural and/ or urban underserved medical issues, while developing their own clinical skills.

The RHPP admitted 22 new first-year medical students in fall 2017. Combined with the second-, third- and fourth-year classes, there were a total of 98 RHPP students continuing to participate in this longitudinal program. In addition to supporting these RHPP students, AzaAHEC funding also allows non-RHPP students, who are interested in rural medicine and urban underserved medicine, to participate in clinical rotations in rural and underserved urban communities. During 2017–2018, the RHPP supported 150 clinical rotations for RHPP and non-RHPP students, totaling 36,100 hours of community-based training in rural and urban underserved sites. The Class of 2018 included 23 RHPP graduates, of whom eight are remaining in Arizona for residency and 17 are entering primary care residency programs.

In 2015 the UA COM – Tucson Educational Policy Council (T-EPC) approved the establishment of a **Rural Health Distinction Track (RHDT)**. This is an opportunity to expand and enhance RHPP, by ensuring that those students who are dedicated to the provision of healthcare in rural Arizona have the option to more fully explore this reality. They are subsequently recognized for their commitment to this idea with a Certificate of Distinction upon graduation, which includes a medallion and documentation on their official transcript. This RHDT requires at a minimum an additional experience of 6 weeks during their third and/ or fourth year of medical school for a total of 16 weeks minimum and a researched Capstone paper. There were 17 students in the class of 2018 RHPP participants who choose to obtain

this Certificate of Distinction. Some examples of the Capstone research papers written include: *“The Adverse Effects of Uranium Contamination in the Navajo Nation: A Public Health Perspective on the Past and a Technological and Public Policy Perspective on the Future.”*; *“Recent History and Current Policy Regarding Immigrant Access to Health Care”*; *“Making a Rural Surgeon and Keeping Them Rural”*; *“Pediatric Dentition on the Navajo Reservation: Concerns, Programs and Practice”*; *“Doing No Harm: Preservation of Traditional Knowledge”*; *“Management of Major Depressive Disorder and Availability of Resources in Rural Areas”*. These are just 6 of the 17 excellent papers written by the RHDT students.

Students also are encouraged to get involved in interprofessional activities. The Arizona AHEC has obtained a Federal grant to encourage these experiences, the **AHEC Scholars Program**. The UA COM – Tucson has enrolled 3 students into this project. Through actual rural community exposures with colleagues from the other professional schools it is expected that true interprofessional education can occur for these students.

UA COM – T is proud that the many RHPP graduates now work in rural and urban underserved areas of Arizona, which contributes to AzaAHEC’s mission to increase and retain the health-care workforce in these communities. In addition, several RHPP graduates also now serve as preceptors, helping prepare today’s medical students for future practice in underserved communities. The college welcomed new preceptors who were RHPP graduates. These young physicians practice in Winslow, Whiteriver, Kingman, and two new doctors in Fort Defiance, Arizona, one in Family Medicine and the other in Emergency Medicine. Two former RHPP students that joined our list of preceptors last year, 2017, practicing in Whiteriver and Fort Defiance, which demonstrates the continued success of RHPP.



Dr. Carlos Gonzales, RHPP Director COM – Tucson, with Dr. Jennifer Albon. In 2017, three RHPP preceptors were honored in October: Dr Jennifer Albon, Pediatrician at the Chiricahua Community Health Center in Douglas, AZ; Dr Andrew Aldridge, General Surgeon of the Flagstaff Surgical group in Flagstaff, AZ and Dr Nazhone Yazzie, General Surgeon at the Tsehootsooi Medical Center in Fort Defiance, AZ.

The UA COM – Tucson: Rural Health Professions Program Outcomes for this year follows. The results demonstrate that RHPP from the UA COM – T has provided approximately 52 physicians to rural Arizona and another approximately 47 physicians are practicing in Arizona’s urban underserved locales.

The UA COM – Tucson is currently researching exactly who and where these former RHPP participants are currently practicing; and the UA COM – Tucson should have that official report available soon.

The University of Arizona College of Medicine – Tucson: Rural Health Professions Program Outcomes												
Year	Total Graduates ¹	All Grads Entering Primary Care Residency		Total RHPP Graduates	RHPP Grads Entering Primary Care Residency ²		RHPP Grads Entering Residency in AZ		Activity of RHPP Grads ³			
		Number	Percent		Number	Percent	Number	Percent	Still Training	Rural AZ Practice	Urban Under-served AZ Practice	Other state
2000	100	56	56%	13	8	62%	8	62%	0	4	3	6
2001	102	55	54%	14	12	86%	8	57%	0	6	3	3
2002	101	62	61%	15	12	80%	9	60%	0	4	3	3
2003	91	46	51%	13	9	69%	8	62%	0	4	2	4
2004	104	60	58%	14	11	79%	7	50%	0	3	5	5
2005	90	50	56%	14	11	79%	11	79%	0	2	4	4
2006	86	51	59%	11	9	82%	3	27%	0	2	3	6
2007	114	56	49%	12	8	67%	5	42%	0	4	5	3
2008	100	51	51%	19	11	58%	10	53%	0	3	4	7
2009	119	61	51%	19	17	89%	8	42%	0	2	1	10
2010	106	63	59%	13	10	77%	8	62%	0	5	3	3
2011	100	50	50%	12	10	83%	5	42%	0	3	1	8
2012	141	80	57%	15	9	60%	5	33%	2	3	4	8
2013	157	79	50%	19	15	75%	8	42%	3	4	4	8
2014	146	90	62%	17	11	65%	8	47%	2	2	2	11
2015	119	52	44%	11	6	55%	6	55%	7	1	0	3
2016	103	40	39%	18	13	72%	4	22%	18			
2017	98	44	45%	22	14	64%	8	36%	22			
2018	117	60	51%	23	16	70%	8	50%	23			
TOTAL	2,094	1,106	53%	294	212	72%	137	47%	77	52	47	92

¹Graduates include UA College of Medicine – Phoenix 2011 through 2014, due to one RHPP for both colleges during that period.

²RHPP specialties for primary care include family medicine, internal medicine, OB/GYN, general surgery and pediatrics.

³Residency lengths vary from three to seven years.

The University of Arizona College of Medicine – Phoenix Rural Health Professions Program

Jonathan Cartsonis, MD
RHPP Director

University of Arizona College of Medicine – Phoenix (UA COM-P) Rural Health Professions Program (RHPP) has been sending medical students to rural and underserved areas of Arizona for five years. The nearly 200 rural rotations allowed students to learn medicine in the communities they already know – and students from urban backgrounds to see first-hand the health needs and public health challenges of rural communities. What important impact do these rural experiences have in common? They promote eventual rural Arizona medical practice. Many students had not previously considered rural practice. After a rural experience they now see it as an option. These representative comments really express it best:

- ▶ I am having LOADS of fun! I cannot explain with words how lucky I am to be here. As my time here comes to an end, I am grateful to have gained this valuable experience, and am wholly looking forward to coming back during 3rd year.
- ▶ Medicine doesn't get any more pure than when it is practiced in a rural setting. It involves independence yet teamwork, a broad scope of practice yet closer relationships with patients, and caring for your patients yet caring for the community.

UA COM-P students may participate in rural rotations in a variety of ways: **1) Rural PAL Block** at the end of Year 1 requires students complete a rural needs-assessment exercise as well as 160 hours of clinical immersion. **2) Clerkship rotations** in internal medicine, emergency medicine, family medicine, pediatrics, general surgery (and soon, Obstetrics and Gynecology). **3) Rural electives** in Year 4 of medical school. **4) The Rural Certificate of Distinction**--an honor earned by those who complete items 1 and 2, spend at least 5 months of clinical training in the same rural setting, attend the required 18 Rural Health Seminars, complete reflective writing assignments, and present original rural health research.

Over forty medical students – a record for us – participated in rural

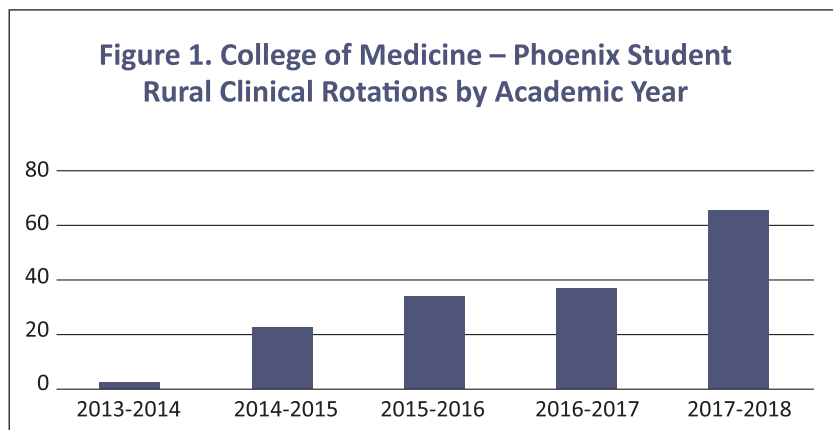
clinical rotations in academic year 2018. Sixteen did so as part of the Rural COD and the rest either completed a Rural PAL Block, clerkship, or elective. A total of 63 rural rotations were completed in this time period (see Figure 1). We expect this growth to continue as we develop new rural emergency medicine and Obstetrics/Gynecology opportunities.

Important outcomes of the Rural Certificate of Distinction include 100 percent first-choice residency matches of all of our graduates to date. Clerkship directors report that students on rural clinical rotations perform better than their urban counterparts on clinical skills and end-of-clerkship exams. For her Scholarly Project, a current Rural COD student is diving into the data in a more rigorous way. She is comparing academic success in urban trained vs rural students. Preliminary results, expected to be available the next year, will inform future program development. In the meantime, our office will continue to monitor the student and alumni progress, tracking and evaluating practice data when it becomes available.

Our annual Seminar Series of eight invited speakers deserves mention. We are pleased to support campus speakers from diverse, rural Arizona communities. An example is the November Native American Heritage month series in which leaders from Yaqui, Salt River, and Navajo tribes are invited to relate their perspectives on healthcare. The topics cover public health, history, public policy, and tribal economic development failures and successes. We hope that a greater understanding of Southwest Native cultures will help students better treat all patients in an effective, sensitive, culturally appropriate manner. Doing so will promote the best patient and population health outcomes.

In line with AzAHEC's efforts to foster interprofessional education (IPE) in rural and underserved areas, our medical students participate in optional and required IPE activities throughout the year. They include Clinical Skills Training, Team Arizona: Interprofessional Healthcare Summit, Longitudinal Patient Care, SHOW-Tri-University student-run homeless clinic, Rural Seminar Series, and the Interdisciplinary Student Council.

Finally, we work to support and develop the newly inaugurated AHEC Scholar Program (ASP), which fundamentally is about immersing students interprofessional education and investigation throughout a two-year curriculum.



AzAHEC grants fund all of our rural-practice-promoting programs: Rural COD, the recently-launched AHEC Scholars Program, rural Scholarly Project, leadership training, new rural training sites development, clinical skills acquisition including ultrasound and leadership training. Ongoing support will allow completion of additional goals in the upcoming year including:

1. Inaugurating a rural Longitudinal Integrated Clerkship (LIC) in Payson in April 2019.
2. Ensuring excellent educational outcomes for the four Rural COD students completing rural clerkship blocks in AY19.
3. Continuation of our 16-session, 2-year-cycle Rural Health Seminars offered to all Year 1 and Year 2 medical students, required of all Rural COD students.
4. Collaboration with clerkship directors to identify and expand rural clerkship offerings in emergency medicine, family medicine, internal medicine, pediatrics, psychiatry, OB/Gyn, and surgery.
5. Expansion the range of rotations available as rural electives.
6. Assistance in the recruitment of medical students to the College of Medicine who are interested in rural medical practice and want to participate in rural educational experiences.
7. Development rural Scholarly Projects from which potential Rural COD students can choose.
8. Modification of site rotations based on careful evaluation of student feedback
9. Continued collaboration in the 2019 AHEC Scholar Program (ASP), a collaborative effort of the seven RHPP participating colleges at the three Arizona universities. many of the existing Rural COD activities at COM – P, such as seminars, leadership training, ultrasound trainings, and clinical preceptorships will be contributed to the AHEC Scholar curriculum, and therefore accessible to students in an interprofessional manner. As the program develops, each of the AHEC-funded components of the Rural COD outlined below will contribute to this innovative, interprofessional ACE curriculum.

More than the numbers, with AzAHEC funding, a supportive community of rural faculty, mentors, university staff, and students has begun to develop. We come together quarterly to share experiences over food, stories and photos, relating both the trials and triumphs of rural medical work. We value the shared knowledge that this alternative medical school path is a better one. We come to realize that connections with patients, preceptors, and rural communities is what we prize most, and that rural medical practice is professionally fulfilling. Assisting students through rural medical education is the most satisfying part of the work of the UA COM – Phoenix RHPP office.

The University of Arizona College of Pharmacy Rural Health Professions Program

Elizabeth A. Hall-Lipsy, JD, MPH

RHPP Director; Assistant Professor; Program Manager, Health Disparities Initiatives and Community Outreach

The UA College of Pharmacy considers developing the pharmacy workforce to address the access challenges of Arizona's rural and medically-underserved communities a key priority to its mission. Access to healthcare services is a top priority and how a state's healthcare workforce is distributed affects access to care, particularly in rural and remote areas. Arizona's rural communities face a considerable challenges in accessing pharmacy care; Arizona workforce surveys determined that only 7% of Arizona's pharmacists practice in urban areas, yet approximately 15% of Arizona's population lives in rural communities. Accordingly, the college is working to address workforce distribution issues through its RHPP and Professional Certificate in Pharmacy-related Health Disparities, both of which have dramatically impacted students' exposure and decision to practice in rural and underserved communities.

Students selected for the RHPP/Professional Certificate are placed in rural communities during three points in their pharmacy education: (1) the summer between first and second year for a four-week introductory community or institutional rotation, (2) the summer between second and third year for a four-week introductory community or institutional rotation, and (3) during fourth year for a six-week advanced pharmacy practice rotation. Over the last eight years, as a result of AzAHEC funding, the RHPP has expanded from recruiting four first-year student participants per year to an average of more than 27 new participants per year. Total RHPP participation represents about 24% of the college's Doctor of Pharmacy (PharmD) student body. In 2017–2018, RHPP funding supported a total of 355 rotations in rural and urban underserved Arizona communities, totaling 72,320 hours of community-based training; 155 of these rotations were completed by RHP Program/Health disparities Certificate students. Among the students in the classes of 2018, 2019, 2020, and 2021 pursuing the Professional Certificate (n=90), 41% are from a rural community (population of fewer than 50,000 people); 47% are from an underserved background (defined as identifying with one or more of the following: (1) first in their family to attend college, (2) received a scholarship or loan for disadvantaged students, (3) relied on federal or state assistance programs, i.e., free or reduced lunch, subsidized housing, food stamps, Medicaid; or (4) lived in an area where there were few medical providers at a convenient distance).

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UA College of Pharmacy RHPP

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In May of 2018, 16 students from the Class of 2018 received their Certificate in Pharmacy Related Health Disparities. Among these graduates, seven students sought and were selected for competitive post-graduate pharmacy residency. This is an impressive placement result (100%) given the overall 68% match rate to residency programs, and over half of the residency programs that selected RHPP graduates this year serve rural or underserved populations. Among the other nine graduates, three accepted employment at a rural Arizona pharmacy, three accepted employment at urban pharmacies in medically underserved areas, and three were undecided at the time of data collection. In a survey of these graduates, 81% reported intending to pursue further training and/or seek employment in an underserved community, 50% intend to train/work in a rural setting and 75% plan to train/work in Arizona. Employment tracking for all RHPP alumni has revealed that since AzaAHEC funding was awarded, 62 students (51%) have obtained post-graduate residency training, 43 (36%) are employed in a rural setting and 54 (52%) are employed treating underserved patients. The college is especially proud to report that 40 RHPP alumni are practicing in rural Arizona, and 12 of our RHPP alumni now act as rural preceptors for current pharmacy students.

To improve student retention and to provide additional structure and support to student participants, the RHPP was enhanced to include a Professional Certificate in Pharmacy-Related Health Disparities in 2010. In 2018, 16 graduating students earned the certificate, joining a total of 82 students who have successfully completed the certificate. In addition to clinical rotations, the certificate requires two classroom-based courses taught by college faculty: *Community Assessment for Pharmacy Students and Health Disparities in the United States*. As a result of the community assessment course, 135 students have conducted community assessments of their RHPP site communities and have presented their findings orally and in written reports. These reports have also been presented at the Annual Interprofessional Rural Health Professions Conference and shared with the AzaAHEC regional centers working in the communities. During rotations, students also participate in community programs and events coordinated by the regional centers, such as PharmCamp, health fairs and other community outreach.

Currently, the RHPP continues to assist in a collaborative project with the college's Medication Management Center (MMC), the Arizona Department of Health Services, Northern Arizona AHEC, Western Arizona AHEC and two rural Arizona pharmacies in San Luis and Flagstaff. RHPP students helped the pharmacies enroll more than 500 diabetic patients to receive free comprehensive medication reviews by the MMC team; and now these students and their supervising pharmacists continue to follow up with at risk patients. All participating patients received quarterly one-on-one counseling sessions and regular follow-up consultations,

conducted in cooperation with their local clinic and pharmacy staff. Results of this ongoing project have been published in professional pharmacy journals and presented at national meetings.

The University of Arizona College of Nursing Rural Health Professions Program

Christy Pacheco, DNP, FNP-BC

RHPP Director

Clinical Assistant Professor

There are persistent health disparities in Arizona, with access to care a key issue particularly among rural and medically underserved populations. Every county throughout Arizona is experiencing a shortage of primary care providers across both rural and urban areas, and include federally designated HPSAs and MUAs. Nurse Practitioners are in a unique position to provide primary care services with a focus on prevention and community and population health. Consistent with the mission of the AzaAHEC program, the University of Arizona College of Nursing Rural Health Professions Program (UA CON RHPP) aims to improve the development and recruitment of an interprofessional healthcare workforce to practice in rural and medically underserved areas across Arizona. During fiscal year 2017-18, a range of didactic and clinical support was provided to CON Doctoral Nurse Practitioner students to develop expertise in working with these communities. CON RHPP Scholars completed clinical and didactic requirements, including rural rotation hours, coursework, activities and a rural focused doctoral project. Additional work continued with the collaboration of RHPP Directors, Regional AHEC Directors, AzaAHEC, and others in the development and implementation of an interprofessional track, the AHEC Scholars Program.

Under the direction of Director Dr. Christy Pacheco, 50 CON Doctoral Nurse Practitioner student Scholars participated in the UA CON Rural Health Professions Program, including 21 newly admitted RHPP Scholars. Twelve of these RHPP Scholars were selected to participate in the AHEC Scholars Program.

Clinical Education

Primary care clinical rotations were completed across Arizona. Twenty-two students during Fall semester and 22 students during Spring semester completed rotations in rural or medically underserved areas. Between July 1, 2017 and December 31, 2017, there were 10,540 primary care encounters in rural or medically underserved areas, 3,986 of which were conducted in rural areas. Clinical sites include newly developed rotations at Benson Hospital, Chiricahua Community Health Center, Poore Free Medical Clinic (Flagstaff), and Tuba City. Students rotating through Tuba City on the Navajo Reservation are able to stay

at the newly developed AHEC housing. Clinical Supervision was provided to Doctoral Nurse Practitioner students in their rural and medically underserved rotations, including the use of HIPAA compliant videoconferencing for remote site evaluation and conferencing. RHPP Scholars also received clinical decision-making support tools during their Arizona rotations, including iPads, clinical apps, and stipend support. Collaboration continued with the AzaAHEC and with the CON in the development of a formalized database for tracking of these rural and medically underserved rotations.

In addition to clinical rotations, students participated in a range of clinical education and simulation activities. Students had the opportunity to participate in the annual CLARION competition focusing on quality and patient safety. Interprofessional teams of medical, nursing, pharmacy, and public health students were able to critically evaluate a clinical case and develop a plan to improve quality and safety, competing locally within the AHSC and the winner then competing nationally. This Director continued to be a facilitator, with this year's team taking second place locally. Students also participated in simulation activities, including an interprofessional team mock code simulation with health professions students at NAHEC and ASTEC in November and on-site in the ASTEC simulation lab with remote participants at the Annual Interprofessional Rural Health Conference pre-conference session in April. Students participated in the LARC hands-on IUD training and simulation workshops at the UA CON, led by this Director, with the aim of providing skills to improve access particularly among rural and medically underserved patients.

Didactic Activities

In addition to clinical coursework, Doctoral Nurse Practitioner students had the opportunity to complete rural focused didactic courses and seminars, chaired by this Director. Rural coursework included NURS 638 Conceptual Foundations for Rural Health Nursing and NURS 773 Rural Health Systems, as well as numerous independent studies. Rural courses were open to all graduate students, across all the colleges, e.g. College of Medicine, Pharmacy, and Public Health, and included a focus on conceptual considerations for providing rural healthcare, rural health status, health behaviors and disparities, and rural health systems, such as Critical Access Hospitals, payors, and workforce recruitment and retention. Independent studies focused on advising and chairing students to complete Doctoral projects with a particular focus on improving care for rural and medically underserved populations. Sixteen students completed NURS 638. Fifteen students completed NURS 773. Under this Director's supervision, 17 students completed independent studies, focusing on projects to improve the health status, outcomes, and/or access to care for rural and medically underserved populations. One student received a CON award for her doctoral project, as well as an AHEC Small Grant to conduct her work.

In addition to didactic courses, there were a number of other resources students with an interest in rural health were able to

utilize. Doctoral Nurse Practitioner students participated in on-campus Brown Bag Lunches to discuss rural rotation and practice issues, as well as Doctoral projects. Though these were targeted to RHPP Scholars, all health professions students interested in rural or medically underserved healthcare were welcome to attend. Students and faculty advisors were able to access program and rural health course and resource information on an updated CON RHPP website on the CON's online D2L CON Doctoral Commons site. RHPP Scholars were also able to use the newly implemented online course site, developed to provide a Scholars-only forum for sharing information and resources, and for networking. This site included both current Scholars and alumni.

Interprofessional RHPP Conference

Students, faculty, and community members participated in the AzaAHEC Annual Interprofessional Rural Health Conference. Twenty-six UA CON students attended the conference, including several participating remotely in live-streamed presentations and hybrid on-site and remotely facilitated discussion. Students received guidance in developing posters focusing on health topics of interest to rural and/or medically underserved populations, ranging from health issues to community assessments. Fourteen students presented posters. New this year included pre-conference sessions. This Director led two sessions, both conducted hybrid on-site and remote, including an interprofessional mock-code simulation for health professions students in the ASTEC simulation lab, and a CE for preceptors and faculty focused on how to provide clinical supervision in rural and medically underserved areas.

AHEC Scholars Program

Collaboration continued with RHPP Directors and Regional AHEC Directors across Arizona, under the direction of AzaAHEC, to formalize the curriculum and requirements for the newly developed AHEC Scholars Program, the interprofessional fellowship track for RHPP Scholars. Twelve RHPP Scholars were selected from the CON to become AHEC Scholars, participating with AHEC Scholars from across the state in an orientation and welcome held at the UA CON in June. Planning continued for the Fall Regional AHEC community immersion activity, with a specific focus on conducting a windshield survey and community needs assessment in the context of the social determinants of health. Topics and speakers for the seminar series are currently being formalized.

Outcomes

The UA CON RHPP has successfully impacted recruitment for rural and medically underserved sites across Arizona. Nine UA CON RHPP Scholars received a certificate of completion at graduation during this time period. Of these, four are working in rural areas, two in urban underserved, and one is planning to continue her previous work with an urban IHS facility. CON RHPP graduates have strongly agreed that CON RHPP coursework and clinical rotations each improved their knowledge in caring for rural and/or medically underserved populations.

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UA College of Nursing RHPP

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The UA CON Rural Health Professions Program serves to provide critical clinical and didactic support to Doctoral Nurse Practitioner students interested in caring for rural and medically underserved populations. Expertise these Scholars are developing in interprofessional primary care for these populations aims to improve access to care and health outcomes. This would not be possible without the extensive collaboration that continues to occur among RHPP Directors and Regional AHEC Directors across the state, AzaHEC, CON, and our community partners.

Arizona State University College of Nursing & Health Innovation Rural Health Professions Program

Diane E. Nuñez, DNP, RN, ANP-BC, FNAP

RHPP Director

Clinical Associate Professor

Clinical Coordinator, Adult Health

The ASU College of Nursing & Health Innovation Rural Health Professions Program (RHPP) aims to provide clinical opportunities for primary care Doctor of Nursing Practice (DNP) students to work in rural and urban medically-underserved areas throughout the state, while fostering interprofessional educational opportunities that stimulate and cultivate students' interest in careers in underserved settings. This contributes to the AzaHEC mission to develop a culturally-competent, diverse health-care workforce to help reduce health disparities and improve health outcomes for vulnerable Arizona populations. DNP students are selected as RHPP fellows based on an essay statement and interview, leadership and community involvement, scholarship activities and potential to seek employment in AzaHEC focus areas upon graduation. Participants' nursing disciplines include family nursing, adult/geriatric nursing, pediatrics and family psychiatric mental health. A clinical and an academic mentor guide RHPP fellows during the program to foster positive clinical experiences and encourage fellows to remain in an AzaHEC service area upon graduation.

Clinical experiences for most students include long-term rotations across two to four semesters in medically underserved communities (MUC) which foster deeper community engagement and long-term patient care continuity. These long-term rotations were part of a pilot advanced practice nurse residency program that began in summer 2016 and has been successful in both recruitment and retainment of the students in RHPP sites not only for direct patient care, but also for process improvement projects as part of their third year doctoral work.

In 2017-2018, Arizona State University RHPP supported students assigned to rural community health care clinics, rural private practice, Federally Qualified Community Health Centers (FQHC), and Health Professions Shortage Areas (HPSA) across all five AHEC regions, totaling 7,590 hours of community-based training. Students were placed in rural or medically underserved communities (MUC) for a total of thirty eight (38) rotations; eleven (11) students had longitudinal clinical rotations in sites that hosted them in a previous semester of training. Students included nine (9) Adult/Geriatric Nurse Practitioner students (A/GNP), nineteen (19) Family Nurse Practitioner students, three (3) Family Psychiatric Mental Health Nurse Practitioner students (PMHNP), four (4) Pediatric Nurse Practitioner students (PNP), and five (5) Women's Health NP students (WHNP). Of the students (n=41) who completed these rotations, 41% are from a rural area, 64% come from a disadvantaged background, 25% are from underrepresented ethnic/racial groups, and 41% are native of Arizona.

The ASU College of Nursing & Health Innovation Center for the Advancement of Interprofessional Practice, Education and Research (CAIPER) provided e-learning modules, interprofessional simulation, and events supported by the Josiah Macy Jr. Foundation as part of the Interprofessional Primary Care Project (The Macy Project) and RHPP students were invited to participate in both e-learning modules and interprofessional student seminars held every other month regarding preparing for Interprofessional Practice in primary care settings. A subset of RHPP students participated in interprofessional direct clinical practice experiences in medically underserved communities in central Phoenix. The Wesley Clinic, the Student Health Outreach for Wellness (S.H.O.W.) clinic, and our newest partner, The Collaborative on Central at the Westward Ho, offered interprofessional student rotations for RHPP students. The project team designs the clinical experience to include not only placement in these designated areas, but also with an emphasis on mentorship. Students are paired with two mentors; one clinical professional and one academic faculty. Each mentorship experience in a service area varied depending on the type of site (private practice vs. FQHC), population served, and resource limitations experienced. The goal is to foster positive experiences through the clinical experience, and mentorship which will further encourage the fellow to remain in one of the AHEC areas upon graduation.

The college faculty and RHPP program director fostered networking, outreach, community service, and education opportunities for RHPP/AHEC program students to participate as fellows with other concurrent scholar/fellow opportunities offered in the college. The aim of this approach is to assist the students to develop knowledge and expertise in the unique challenges of working in rural and medically underserved communities (MUC), along with the relevant health and access issues these populations face. Students are encouraged to take relevant coursework including DNP690 Healthy Equity and Social Justice, as one of

the program electives. This collaboration offers opportunities for scholarship and support for clinical experiences in the identified rural or MUC's.

As part of the CAIPER Integrated Interprofessional Primary Care Curriculum, RHPP students engaged in the following e-learning modules:

- ▶ What is Interprofessional Education?
- ▶ Interprofessional Communication.
- ▶ Involving Team Members in Primary Care Practice.
- ▶ Developing an Integrated Plan of Care.

In addition, RHPP students were invited to interprofessional student seminars held every other month and included discussion on the following topics:

- ▶ Preparing for Interprofessional Practice: Trauma Informed Integrated Care
- ▶ Preparing for Interprofessional Policy Practice: How Health Professionals Can Influence Health Policy
- ▶ Preparing for Interprofessional Practice: Meeting the Primary Care Needs of Arizona's Multi-Ethnic Refugee Communities
- ▶ Preparing for Interprofessional Practice: Addressing Substance Use Disorders in the Primary Care Setting

The college's academic scholarship committee fosters networking, outreach, community service and education opportunities for RHPP fellows to interact with other interprofessional groups of students. This approach assists the students in developing interdisciplinary knowledge and expertise in the unique challenges of working in rural and urban medically-underserved areas, along with an understanding of the relevant health and access issues these populations face. Specific opportunities that arose during 2017–2018 included *TeamAZ*, an interprofessional workshop; development of new health interventions in underserved areas; and evaluation of student practice inquiry projects.

Student participation in the 6th Annual Interprofessional Conference included 22 participants and 6 poster presentations. Students report enjoying the interprofessional breakout sessions, panel participation, opportunities to network and engage with their respective AHEC program directors, as well as sharing clinical experiences and project work with students from other disciplines and areas throughout the state. All students were provided with AHEC director contact information at the start of the rotation and encouraged to connect with the agency in community outreach and education. The students had an online forum to network with peers from ASU (through their Blackboard organizational site) where events, supports, and resources were shared. Mentorship was provided for clinical faculty from the project director to assist in clinical placements, navigating challenges, and resource utilization that faculty could pass on to preceptors. Another interprofessional event, *TeamAZ*, was offered and 19 RHPP students attended that workshop as well.

Arizona State University RHPP student post rotation testimonials and graduation plans:

My plans post-graduation are to work as an adult geriatric NP in a primary care setting for underserved populations. I am from a small town of less than 10,000 people. I would love the opportunity to serve as a NP in a rural setting similar to what I experienced growing up and to provide these rural settings with the practitioner services they need and deserve.

– Chelsea Cason, RHPP student, Adult-Geriatric

I am interested in helping reduce the health and healthcare disparities among the medically underserved population. After graduation, I plan to practice my profession as a pediatric nurse practitioner in a primary health care clinic catering to the medically underserved population. I will utilize all the knowledge I have learned regarding evidenced-based theories and practice with an aim of revolutionizing healthcare delivery to help increase accessibility of quality healthcare among the medically underserved.

– Megan Feith RHPP student, Pediatrics

After graduation, my plan is to serve as a primary care provider especially in rural area where the population is under-served. I have lived in a rural area before and I am interested to move back to one again in the future as my family have always enjoyed that lifestyle well.

– Heather Ryan, RHPP Student, Family Psychiatric Mental Health

Northern Arizona University School of Nursing Family Nurse Practitioner Program Rural Health Professions Program

Douglas Sutton, EdD, MN, MPA, APRN, NP-C, NEA-BC
Associate Clinical Professor

The NAU SON Family Nurse Practitioner Program continues to admit, train, graduate and place primary care providers in rural and medically underserved communities (R/MUC) at rates that exceed more urban university settings across the nation (51% of 2017 graduates). The goals and objectives of the RHPP program remain congruent with University, College and School of Nursing objectives, and students report a high level of satisfaction

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NAU RHPP

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(satisfied or very satisfied = .83) with their training and clinical placement assignment and with assigned preceptors across the state of Arizona.

As a direct result of funding initiatives, and support through Federal, State, Local and University resources the FNP program at NAU has experienced unprecedented growth, and over the past five years has increased enrollment by well over 50%, with many qualified applicants being deferred due to limitations in clinical site settings, and available classroom faculty. While the exponential growth of the program and the high degree of satisfaction and resulting job placements indicate that these initiatives have proven successful, it has also placed strains on an already overburdened clinical placement process that must compete with our fellow ABOR Universities to locate and develop relationships with qualified preceptors willing to mentor future primary care providers in R/MUC. Unlike medical student traineeships, nurse practitioner preceptors are typically not compensated during the student training period.

Enrollment in the FNP Program currently meets 100% of interested and qualified applicants. The funds are disbursed to students at the end of each academic term in which they are enrolled in clinical training experiences. RHPP funding is used to support ongoing interprofessional, one-on-one and skills and technology educational initiatives with our statewide Arizona AHEC partners. However, as the mission of NAU is to support and train underrepresented healthcare professional minorities, including various American Indian tribes, we continue to ensure that 100% of all enrolled FNP students have some experiences, as well as classroom and theory content related to R/MUC Communities, which is consistent with the goals of our College and University. NAU through various health professions programs strives to improve health outcomes in our poorest and most marginalized community members across northern Arizona.

NAU is located geographically the furthest from the U of A, and the resources of the larger and more integrated interprofessional programs at our fellow Arizona BOR Universities. This results in additional student expense to participate in some IPE and RHPP learning opportunities with disciplines outside of nursing (medicine, pharmacy and public health). However, through the support of the Arizona AHEC Offices we are utilizing more technology to overcome these geographical barriers.

Continued integration with all regional AHEC directors has demonstrated opportunities for educators attempting to facilitate student training and placements in areas of the state that heretofore created great difficulties. NAU's partnerships with NAHEC and EAHEC this year have generated positive learning outcomes, and greater awareness of primary care provider needs in these regions of the state of Arizona. RHPP Program Direc-

tors across all state university programs and their students have been regularly involved in interprofessional training experiences, and this has been frequently reported as being successful for the NAU FNP students involved. One major advantage of these activities includes the professional socialization and team building awareness to come together to improve client or population health outcomes. IPE activities also reduce duplication of learning and teaching experiences, allowing RHPP students to experience the richness of working as part of an IPE team, as well as preparing them to become providers in R/MUC settings.

Using the regional AHEC Centers, 100% of the NAU SON FNP RHPPP students will continue to receive rural and medically underserved clinical placements and training. Currently, the NAU students rotate through NAHEC and EAHEC almost exclusively, but NAU has placed students across the entire state utilizing opportunities available in each of the regional AHEC centers. Discussions were undertaken to implement a service learning experience with the Hopi Nation to emulate the service learning model already in place along the southern border of our state. Due to tribal procedural obstacles, NAU was unable to establish this service learning opportunity.

The NAU SON recognizes the impact of our partnership with the Arizona AHEC, the RHPP Training Program, and the ability to support IPE across disciplines who provide care to R/MUC across Arizona. In addition, NAU fully supports the development of the AHEC Scholars Program being implemented in June 2018. NAU is unique in that its main campus is geographically located nearest to the nation's largest American Indian reservation, the Navajo Nation. Also, northern Arizona, as defined by geography, encompasses 51% of the land mass of the state, but has no major urban settings within its region. Therefore, NAU has a long history of recognizing the unique unmet healthcare needs of the citizens of this region and we continue to be a strong advocate to foster future learning experiences that can improve health outcomes for our communities.

The University of Arizona Mel and Enid Zuckerman College of Public Health Rural Health Professions Program

Leila Barraza, JD, MPH,
RHPP Director

It has been a very busy year as we continue to provide opportunities for our MPH and doctoral students to participate in service learning courses and activities throughout our state. These community-engaged experiences provide the framework for understanding the assets and issues of our rural and underserved communities. Our partnerships with the AHEC centers throughout the state are the platform for active learning and reflection on strengthening health equity and eliminating health disparities.

This year Leila Barraza, Assistant Professor, and Jennifer Peters, Arizona State Office of Rural Health Program Manager, join the leadership of our RHPP program. They both have extensive experience leading our service learning courses and will be providing their expertise and skills in guiding the overall Rural Health Professions Program under the structure of the Arizona Center for Rural Health, including our new AHEC Scholars Program.

During the past year, 62 students have participated in our service learning courses and activities. Forty-seven percent are either the first in family to attend college, have received a scholarship or loan for disadvantaged students, have received or the family has used federal or state assistance program, or lived where there were few medical providers at a convenient distance. Twenty-three percent have grown up in a rural area and 63 percent have grown up in Arizona.

Family and Child Health in Urban Settings HPS 597A

Our Tucson Course (HPS 597A) provides students 'real world' and applied opportunities to learn about current health and social policy affecting families and children. We directly engage with organizations and agencies serving marginalized populations, including families living in urban stress and poverty, mixed immigration status families, resettled refugees, Indigenous peoples, youth, individuals with mental health issues, and families in transitional housing. Students observe, conduct service and engage in reflective discussion on how programs address socio-economic challenges, migration status, trauma, and health behaviors when working with diverse populations to improve health outcomes.

To achieve this, we partnered with organizations including: *Clinica Amistad*; *Primavera Foundation*; *Iskashitaa Refugee Network*, and the *Southern Arizona Oral Health Coalition* to design intensive service experiences. In addition, we developed site visits and panel discussions with the *Consulado de México*, *Derechos Humanos*, *International Rescue Committee*, *Pima Community Access Program*, *Pima County Housing Center*, *Southwest Fair Housing Council*, *The Garden Kitchen*, and the *UA College of Medicine*.

Rural Health Service Learning Institute PHPM 597D

In our course based in Safford/Thatcher and Morenci (PHPM 597D), students are introduced to the industries of copper mining and cotton farming and the impacts these industries have on the health and life of a rural community. Much of the course focuses on the strength and collaborative nature of the local community to address the health needs of the community with less resources and personnel than typically seen in urban areas.

The course collaborates closely with the *Eastern Area Health Education Center (EAHEC)*, the *Arizona Cooperative Extension* as a major partner to introduce water issues and farming related to rural agriculture, and the *Boys and Girls Club*, to allow our students an opportunity to teach a hand hygiene lesson to children. We learned about community gardening through the part-

nership with *Our Neighbors Farm & Pantry*. The *Graham County Health Department* is a key partner and connects students with other community partners, including *SEACUS*, which introduces the students to the elderly experiences in a rural community. The partnership with *Freeport-McMoRan Mining Company* introduces environmental issues experienced in the rural, mining town of Morenci. Students learn the current practices and community values as well as the history of the community and struggles of social and environmental justice in the region.

Border Health Service Learning Institute PHPM 597C

Our Border Health course is centered in the Douglas, Arizona and Agua Prieta, Sonora region. This course connects the dots between migration, health, and economic development and identifies opportunities for advocacy to improve the quality of life in border communities. We participated in extensive activities, including health education activities with children, water distribution for migrants in the desert, tobacco policy photo voice activities with adolescent youth, and community presentations. This was accomplished in collaboration with many community partners along with the overall guidance and support of *SEAHEC*.

We worked closely on many activities which were hosted by *Frontera de Cristo*, a Presbyterian border ministry located in the sister cities of Agua Prieta, Sonora and Douglas Arizona. The ministry supports community initiatives including *DouglasPrieta Works*, a local binational effort to provide sustainable development in the community; the Migrant Resource Center, working to meet immediate needs of migrants including housing, medical attention, clothes, food as well as abuse documentation; *CAME* a hospitality center for Migrants and *Café Justo*, a coffee cooperative with an innovative model for sustainable development.

We had the opportunity to learn about the work of the local health departments in both Cochise County and the Municipio of Agua Prieta. The *Hospital General* provided a comprehensive description of public health services and direct health services for the underserved population as well as a more comprehensive understanding of the Mexican Health Care System. *Cochise County Health and Social Services*, the public health authority for the entire County is presently working to secure accreditation as a health department and is thus implementing the Cochise County Community Health Improvement Plan (CHIP). We also worked closely with the *Cochise County Youth Health Coalition* providing the youth with skills and techniques for photovoice to portray community attitudes toward tobacco and drug use.

Binational Interprofessional Service Learning Experience in Nogales

This three-day Binational Interprofessional Service Learning Experience of community engaged approaches to health equity brought together 15 UA Arizona Health Sciences Center students (public health, medicine, pharmacy and nursing) and 16 students

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UA Zuckerman College of Public Health RHPP

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from Sonora, Mexico in the disciplines of medicine, nursing, physical therapy, dentistry, veterinary medicine, nutrition, and psychology. By the end of the weekend, students participating in the experience gained a deeper understanding and skills in interprofessional teamwork and communication; binational collaboration; and community engagement as well as increase their awareness of border communities' unique strengths and challenges.

Phoenix Urban Service Learning PHP 597F

During the winter session of 2017 we offered a service learning course that focused on urban issues in the Phoenix region. Students collaborated with and learned from a number of organizations including *St. Mary's Food Bank, Circle the City, Fresh Express, UNOM, St. Vincent de Paul, Human Services Campus, Maricopa County Department of Public Health, ADHS, the City of Phoenix, and the Vitalyst Health Foundation.*

A number of key health related themes emerged throughout the week and were critical to both the informal discussions and formal reflections. Some of these themes included: challenges of transportation and the built environment, barriers to health and human services, mental health issues, housing insecurity, food insecurity, and job training. Discussion of all of these issues were highlighted within a health equity, social justice and intersectionality framework with a focus on the overall role of public health professionals.

Maternal and Child Health in Rural Settings HPS 597B

Our Northern Arizona service learning provides a lens into the health systems and community settings in the Navajo Nation and surrounding areas. Students heard from a variety of programs ranging from community health centers, federal government operated health facilities, tribal-operated health facilities and non-government non-tribal programs. In addition to learning about the different health systems, the students provided health education sessions, assisted with after-school programming, sheared sheep for the elderly, and assisted with a Hopi Lunar Run. The week was full of adventure as students got to experience life in rural settings. They hiked forest trails in Flagstaff, AZ and scenic trails on the Navajo Nation Reservation. The students experienced first-hand the barriers to accessing healthcare for many families living in rural Arizona. They also experienced the many benefits of living in rural Arizona such as the scenic beauty, thriving culture, innovation, and creative resourcefulness of the people.

Collaborative Development of the AHEC Scholars Program

This year has included an exciting opportunity to collaborate with the AzaAHEC Program Office and all of the Rural Health Professions Programs in our state as well as with all of the AHEC Centers in the development of the AHEC Scholars

Program. We have accepted ten MPH/doctoral students from our College for the program's inaugural year.

Final comments

As always, our Rural Health Professions Program continues to provide our students, faculty and community partners with the opportunity to collaborate in solving real world public health issues. The program continues to inspire our students, faculty and community partners.

Sixth Annual Interprofessional Rural Health Professions Conference

The Sixth Annual Interprofessional Rural Health Professions Conference took place on Friday and Saturday, April 20-21, 2018, at UAHS with over 100 attendees. The theme of the conference was cultural wisdom. Attendees included students, faculty, and staff from the University of Arizona, Arizona State University, and Northern Arizona University as well as health-care professionals from the community. The conference offered in-person as well as technology-enabled participation from remote locations. Notably, this conference provided opportunities for RHPP students to network and discuss their rural health experiences. RHPP students came from the ASU College of Nursing & Health Innovation; NAU School of Nursing; and the UA Colleges of Medicine (Tucson and Phoenix campuses), Nursing, and Pharmacy; and UA Mel & Enid Zuckerman College of Public Health.

Roberto Dansie PhD and Mr. Joe Simmons were invited as keynote speakers to further illuminate cultural wisdom, healing energy, and health disparities of American Indian and rural/underserved populations. The conference began on Friday, April 20, with a virtual simulation demonstration presented by the Arizona Simulation Technology and Education Center, the Arizona Telemedicine Program, and faculty from the UA College of Nursing and was followed by a pre-event faculty in-service event to aid working with students in



Dr. Roberto Dansie (l) spoke to in-person and remote audiences at the Sixth Annual Interprofessional RHPP Conference.

rural and Medically Underserved Communities (MUC), an opening reception, and, finally, a panel discussion on the social determinants of health. The panel was comprised of Sally J. Reel, PhD, RN, FNP, FAAN; Roberto Dansie, PhD; and Mr. Joe Simmons.

The second day of the conference began with a morning blessing given by Carlos Gonzales, MD, FAAFP, and the keynote presentation given by Roberto Dansie, PhD. The keynote address regarding cultural wisdom can be viewed at <https://azahec.uahs.arizona.edu/>. Conference participants also completed small group, interprofessional workshop activities furthering discussions on interprofessional education and cultural sensitivity. These small groups were facilitated by faculty and other health professionals.

Additionally, the conference included poster sessions that were available both in-person and at remote locations through technology-enabled viewing. Thirty-five posters were authored and presented by students and faculty from the ASU College of Nursing & Health Innovation, NAU School of Nursing, and the UA Colleges of Medicine (Tucson and Phoenix campuses), Nursing, and Pharmacy, and the UA Zuckerman College of Public Health. The AzaHEC Program Office offered awards for the top two posters (outstanding and excellent) at the conference for the first time this year. The posters were judged by three volunteers (AHEC staff and faculty), and the poster winners were announced at the conclusion of the conference. The outstanding poster, “Sierra Vista, AZ Community Health Assessment,” authored by Yvonne W. Ng and David H. Seto was awarded \$100, and the excellent poster, “School Wide Nutrition Intervention: Community Based Participatory Research,” authored by Elise Corriveau was awarded \$50. Poster topics were wide-ranging and helped in furthering the discussions on cultural sensitivity, interprofessional education, and the social determinants of health. The posters can be viewed at <https://azahec.uahs.arizona.edu/content/2017-rhpp-poster-session>.

A survey was administered to conference participants during the final day to determine what areas of the conference were successful and what areas may need to be improved upon. Highlights of survey findings include:

- ▶ Over 70% of survey responses indicated ‘strong agreement’ or ‘agreement’ that they were likely to change their practices and/or work with rural and underserved populations as a result of having attended this conference.
- ▶ More than 75% of survey responses indicated that the poster session, opening keynote by Roberto Dansie, Ph.D., afternoon keynote by Mr. Joe Simmons, and facilitated discussion on Saturday afternoon were either ‘excellent’ or ‘satisfactory.’
- ▶ 74% of survey responses rated the conference overall as ‘excellent’ or ‘satisfactory.’

AzaHEC-Supported Academic Programs

The University of Arizona Health Sciences Core Interprofessional Education Events

Interprofessional Education (IPE) events engage students across the disciplines of medicine, pharmacy, and public health in opportunities to learn and practice in interprofessional, collaborative, team-based environments and provide safe, quality, patient-centered care. In 2017-2018, four interprofessional training exercises were held. These four exercises were completed using a combination of blended online learning, in-person, and team learning experiences. Each of the IPE events helped to facilitate student collaboration and communication across disciplines and professions. At each exercise, students collaborated in interprofessional teams and interacted with interprofessional facilitators representative of academia and professional practice.



Interprofessional student teams at pandemic event

On September 5th, 2017 the first of the four IPE exercises, *Interprofessionalism for Patient Safety*, included 426 health professions students in the UA Colleges of: Medicine – Tucson, Pharmacy, Nursing, the Zuckerman College of Public Health, Nursing – Phoenix, and Pharmacy – Phoenix. The event focus was on how collaborative team behaviors promote positive patient safety outcomes. Students then learned about shared and complementary scopes of practice and how to be constructive team members.

On October 20, 2017, the *Pandemic Exercise in Disaster Preparedness* integrated video conferencing technologies between the UA’s Tucson and Phoenix campuses and provided students exposure to issues that arise during a disease epidemic and underscores the importance of coordination and teamwork in preventing and controlling the spread of disease. Similar to real world events, the theme for this exercise was an influenza epidemic. Participants totaled 381 students. The students were from the ASU School of Social Work and The UA College of Nursing in Phoenix. As well as the UA College of Agriculture

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UAHS Core Interprofessional Education Events

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& Life Sciences, The UA College of Law, the UA College of Medicine, the UA Mel & Enid Zuckerman College of Public Health, the UA College of Nursing, and the UA College of Pharmacy in Tucson.

On February 8th, 2018 *Disabilities: An Interprofessional Exercise* was held. The event introduced students to important topics impacting individuals with disabilities. The exercise teaches students the roles and functions of the members of an interprofessional team in the delivery of patient-centered care for persons with disabilities. The student participation in this event totaled 490 students. Students were from the UA College of Nursing – Tucson, Pharmacy – Tucson, Medicine – Tucson, College of Letters Arts & Sciences, Nursing – Phoenix, Pharmacy – Phoenix, and Northern Arizona University's College of Health & Human Services – Phoenix. Student participants were assigned to an interprofessional team of six members. These teams participated in panel discussions with guest panelists who have personal experience of disabilities and watched videos of patient experiences. This exercise focused on team skills and effective communication.

The final event for the academic year, *Interprofessional Team Behavior Simulation*, took place over multiple dates from April 2nd to April 29th, 2018. The event included 359 students in the disciplines of Nursing, Pharmacy, Medicine, and Public Health representative of Tucson and Phoenix campuses. Through a situational learning exercise, vital team skills such as closed loop-communication, constructive intervention, knowledge sharing, reevaluation and summarizing, and mutual respect were developed. The simulation provides students with the opportunity to work with other health professions and respond to a code, thereby learning effective communication for the ultimate benefit of patients.

National CLARION Interprofessional Case Competition

This year marked UAHS's third time participating in the National CLARION Interprofessional Case Competition, an initiative at the University of Minnesota. The competition centers around a highly complex, fictitious case with real-world issues related to medical errors and patient safety. Three interprofessional teams of University of Arizona Health Sciences (UAHS) students competed on Friday, February 23, 2018. The case competition is an opportunity for students to gain clinical and operational knowledge that may not otherwise be received through their formal education. The 2018 case focuses on the opioid epidemic, with real-world challenges relating to patient safety in the health care system and how it might be improved. The case is analyzed by team members who present a root-cause analysis, and mentors provide guidance and technical support. Participating teams,

consisting of three to four students from at least two different disciplines, create a presentation, analysis, and recommendations in the context of real-world standards of practice. The purpose of the competition is to empower health professions students to use interprofessional communication and teamwork to improve patient safety, patient outcomes and the quality of health care.

UAHS Local CLARION Interprofessional Case Competition Results



First Place

- ▶ Aeryana Beaudrie Nunn, UA College of Pharmacy
- ▶ Christina Lauren Erdelyi, UA Zuckerman College of Public Health
- ▶ Tianyu Tang, UA College of Medicine – Tucson
- ▶ Rebecca Veenstra, UA College of Nursing

Mentors: Dr. Terri Warholak, UA College Pharmacy, and Sandy Kirkpatrick, UA College of Nursing.

Second Place

- ▶ Madhulika Banerjee, UA College of Medicine – Tucson
- ▶ David Lee, UA College of Medicine – Phoenix
- ▶ Aaron Morrow, UA College of Nursing and Elizabeth Rivard, UA College of Pharmacy

Mentors: Dr. Christy Pacheco, UA College of Nursing and Dr. Lisa Davis, UA College of Pharmacy.

Additional mentors were Claire Bethel, UA College of Nursing, Dr. Melissa Cox, UA College of Medicine, and Dr. Bradley Dreifuss, UA College of Medicine – Tucson. The event was judged by Dr. LeeAnne Denny, UA College of Medicine, Phoenix, Dr. Francine Gachupin, University of Arizona Cancer Center, Dr. Doug Taren, UA Mel and Enid Zuckerman College of Public Health, Tucson, and Dr. Ted Tong, UA College of Pharmacy.

The winning UAHS team from the February 23 UAHS CLARION Case Competition traveled to Minneapolis, MN to compete in the National CLARION Interprofessional Case Competition, April 13-14, 2018.

CLARION Interprofessional Case Competition National Winners

1st Place – Des Moines University and Drake University
2nd Place – Wichita State University and University of Kansas
3rd Place – University of Missouri.

AzAHEC-Supported Training Medical Residencies

The University of Arizona College of Medicine Rural Health Professions South Campus



Sommer Aldulaimi MD, FAAFP
*Associate Program Director
Rural Health Coordinator*

The mission at the University of Arizona residencies based at Banner – University Medical Center South Campus is to train physicians to work in rural and underserved areas in Arizona. The Family Medicine and Internal Medicine residencies at the Banner – University Medical Center South Campus (BUMCS) send residents every year (in conjunction with Arizona AHEC) to rural areas in Arizona to train as part of their educations to helpful this mission. The residents go for a month at a time and live in the rural community where they are working. Our rural rotations are some of the most valued experiences that our residents have during their entire residency. Spending significant amounts of time in rural areas (16 weeks minimum for the family medicine residents) allows the resident physicians to experience the professional and personal benefits of living and working in these underserved communities.

In Academic Year 2017-2018 Arizona AHEC sent first, second and third year Family Medicine residents to rotations in family medicine, obstetrics and emergency medicine in rural Arizona. The Family Medicine Residents had the privilege to serve in the communities of Fort Defiance, Nogales, Polacca, Safford, Show Low, Tuba City, Whiteriver, and a new site at Payson. We are currently working on establishing two additional sites in Sells and Casa Grande for family medicine. The internal medicine residents rotate at Payson and Green Valley in internal medicine, and have added Casa Grande as a new site for next year. The Family Medicine Residents completed 30 rural rotations, and the Internal Medicines completed 21 rural rotations during the academic year 2017-2018.

The University of Arizona College of Medicine at South Campus Family Medicine Residency continues to see a higher percentage of their graduates stay to work in underserved and rural areas of Arizona. Of the eight residents that graduated in 2017, 3 are serving in rural areas in Arizona and 1 is serving in federally designated Health Professional Shortage Areas in Arizona. An additional 3 are serving in rural areas outside of Arizona. For the upcoming graduates of our program, 3 of 8 will be serving in Federally Designated Health Professional Shortage Areas and

2 of the 8 in rural areas in Arizona (5/8). Over the past 3 years of graduates 41% work in rural areas in North America, with 40% of those practicing in rural areas of Arizona, and 50% of our graduate from the last 3 years work in federally designated Health Professional Shortage Areas of Arizona. The Family Medicine Residency had the honor this year of receiving the National Rural Training Track Collaboration Rural Recognition for having such a high percentage of residents go on to practice in rural areas after graduation. This is an honor that only 11 other residencies in the nation received!

Our family medicine and internal medicine residents continue to see their rural rotations as a key element of their training. The following are some of the thoughts they have shared about their experiences:

“One of the most exciting opportunities afforded by our program is the ability to learn and work, side-by-side, with rural physicians. My experience at Mount Graham in Safford, Arizona was amazing. They [the physicians there] truly encompass the full scope of family medicine, including both inpatient and outpatient care, along with full-spectrum obstetrics! Those docs are amazing!”

– Ana Casanova (PGY 1)

“I did my intern rural rotation in Nogales, AZ. Even though it was less than an hour away from Tucson, Nogales was a whole new world. Border medicine was a combination of rural and international medicine. Many patients would have care in Mexico and the US, with both sides having difficulty being far from “the city” where patients could have access to medical specialists or other medical resources. The juxtaposition between Mexican and American healthcare provided a great learning experience. Overall, this rural rotation gave me an excellent opportunity to practice medical Spanish and I came back to Tucson with a new appreciation for our community resources.”

– Tricia Wu (PGY 1)

“Part of having a truly educational experience involves being challenged yet refreshed, and my rural experience at Whiteriver was exactly that. “Productive discomfort” is what one doctor there called it, and I couldn’t agree more. It was the perfect intersection between applying what I had learned back home at my residency in Tucson, and pushing myself to be more resourceful and culturally humble, but at the same time more confident. Having tools that I learned in residency combined with the menagerie of opportunities to use them made this rural experience exceptional. Lessons learned on the reservation will stay with me long after I graduate from residency. My time here has opened my eyes wider to the reality of poor health outcomes and health disparities. I have no doubt that this will help me provide more understanding care to not only patients, but also, for the very communities that comprise this beautiful state, and beyond”

– Patty Wang (PGY 2)

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UA College of Medicine RHP South Campus

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“My rural experiences were absolutely amazing and unique. As a resident, I was given the opportunity to have a lot of autonomy and independence taking care of patients. The attendings have so much experience and knowledge to teach residents, and really do make the residents feel like they are part of the team.”

– Chadi Berjaoui (PGY 2)

“My rural experience allowed me to practice family medicine to its fullest potential. I was forced to do more real time research, whether it was reading or calling specialists. It made me realize how much we depend on specialist consultations in the city for things that we are perfectly capable of handling.”

– Ana Mendez (PGY 3)

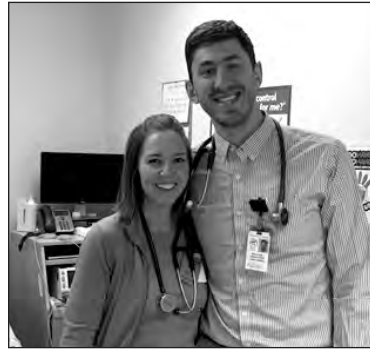


A festival outside of Hopi Health Center that one of our residents, Ana Mendez, participated in.

“I loved all my rural experiences especially Fort Defiance for Family Medicine and Safford for ED/Family medicine. I really enjoyed the variety of patient diagnosis (being the front line rural provider) and the opportunity to perform multiple procedures. Everyone was very welcoming into their communities and made me feel like I was part of their team.”

– Jenny Saint Aubyn (PGY 3)

One of our graduates Myles Stone, from last year who is now working at the Whiteriver Reservation writes, *“Rural health is such a unique field of medicine that it really must be seen first-hand. There’s no other way for doctors and future doctors to know if it’s right for them. When I first started medical school, I was convinced that I’d end up working in an urban clinic. But I was exposed to rural medical practices early in medical school, and continued to have additional rural rotations throughout residency. With each new experience, I moved closer to deciding to eventually work in a similar environment once*



Myles Stone at his new job in Whiteriver with his wife.

I finished training. The pinnacle of my rural health training experiences came during my second year of residency, when I spent a month working in a rural Indian Health Service hospital (the fourth I had rotated through during residency). It was one of the most gratifying and interesting months of my medical training, and was the single most important

element of me deciding to work there after residency. I’m still working at that hospital today, and I feel so grateful to have had the exposure to it during my training. There’s no way I would have even known it existed, let alone how wonderful of a place it is to practice medicine. I’m very lucky to have trained in a program that places such a strong emphasis on rural medicine.”

The Graduate Medical Office of Banner – University Medical Center of Tucson South Campus and residents want to express our gratitude to the Executive Branch of the State of Arizona, the Legislature of the State of Arizona, and the Arizona Area Health Education Center (AzAHEC) led by Dr. Sally Reel for continued support for the mission of educating physicians who are ready and eager to serve the medically underserved citizens of Arizona.

NAHEC/North Country HealthCare Family Medicine Residency Program

Marica Martinic, MPH

NAHEC Director

Years in the making, Northern Arizona AHEC (NAHEC) /North Country HealthCare has developed a family medicine residency program. The need has never been higher, the solution never clearer and the opportunity never better to develop the only Accreditation Council for Graduate Medical Education (ACGME) physician residency program in Arizona using the Teaching Health Center model. Unique not only in its teaching model but also its location, it is the only ACGME residency program north of Phoenix and the only program owned by a regional AHEC center. The physician shortage facing our nation and Arizona is a serious issue, and family medicine physicians are well-suited to meet the health-care needs in rural and frontier areas. Our new family medicine program will be one-of-a-kind in the state. It will help meet regional and statewide primary care workforce needs, increase access to care, develop a culturally-attuned physician workforce, have far-reaching economic impacts and address longstanding health disparities. The family medicine residency program is well on its way to implementation, with ACGME accreditation received in fall 2017 and residents expected to begin in summer 2020.

Clinical Translational Sciences Graduate Program

Jorge Gomez, MD, PhD

*Assistant Professor of Public Health, MEZCOPH
Associate Director, Center for Elimination of Border Health Disparities*

Ron Hammer, PhD

Professor, Basic Medical Science

The Clinical Translational Sciences graduate program (CTS) received support for education regarding clinical translational sciences as a means to address health disparities. CTS students learn to conduct basic and translational research that leads to advances in the understanding and treatment of diseases, particularly in terms of examining the reasons and remedies for health disparities among diverse populations. Arizona has diverse and distinct populations, including large numbers of Mexican Americans and other people of Latin American heritage, as well as Native Americans. These populations display health disparities in terms of the incidence of different diseases, in some cases apparently linked to disparities in lifestyle factors and exposure to contaminants, in addition to disparities in access to and pursuit of state-of-the-art medical treatments.

Support to CTS included salary/stipend support to four CTS students in University of Arizona Health Sciences. Neda Al Rawashdh, Lakshmi Madhavpeddi, Emily Szeto and Talal Zafar. Each of these Ph.D. students supported prepared academic work. Abstracts of each student's work are available www.azahec.ahsc.arizona.edu through 7/1/19. Ms. Madhavpeddi has examined how mortality rates from cardiovascular disease (CVD) and the prevalence of CVD risk factors in Arizona are correlated with both race/ethnicity and socioeconomic status. Her findings point to the need for health education and potentially the provision of health care specific to Arizona's most vulnerable populations. Ms. Szeto's work highlights the disparities among racial/ethnic groups in the incidence and mortality of breast cancer, in Arizona and nationally. She points to differences in genetics as well as economic status, culture and education as factors that can explain the disparities and recommends genetic testing for Native Americans, the least studied population. Ms. Al Rawashdh, who has a background in pharmacy, has reviewed the efficacy and optimal application of a drug that mitigates side effects of chemotherapy. Mr. Zafar has reviewed information regarding deaths in Arizona from opiate overdoses and is examining culturally specific factors that may contribute to an increased risk for Hispanics. His study examines the disparities in the risks of opiate overdose among Arizona's populations, including the possibility that *yerberias* catering primarily to Hispanics might be a conduit for sale of counterfeit medications containing opioids.

Border Latino and American Indian Summer Exposure to Research (BLAISER)

Jorge Gomez, MD, PhD

*Assistant Professor of Public Health, MEZCOPH
Associate Director, Center for Elimination of Border Health Disparities*

Border Latino & American Indian Summer Exposure to Research (BLAISER) is program offered by the University of Arizona Health Sciences (UAHS) every summer. The program goals are to expand the pipeline of future physician scientists and health care researchers; to attract students of diverse population who have a strong interest in biomedical research, and who want to learn more about Health Disparities from Southern of Arizona; and to encourage students to pursue graduate studies. The program equips each student with the necessary skills to become competitive graduate applicants.

The program is primarily a research based experience. BLAISER students are matched with a top UAHS scientist based on their research interest. Students have the opportunity to be in a laboratory for 10 weeks acquiring experience in research. In addition, the students receive guidance, advice, and assistance

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Left to Right: Luis Machaco, Mattsue Cahue-Lopez, Tun Pyai So Nef, Brooke Quiton, Stefano DiCenso. Mattsue Cahue-Lopez stated: "I was introduced to remarkable individuals (professors, scientists, community members), learned about health disparities affecting our families, engaged with determined future health professionals (my peers), and I exposed to university resources that helped me strengthen my academic and professional skills. In addition, I had the opportunity to learn how to conduct research, explore career options, define my academic path, and expand my professional network".

BLAISER

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in navigating a career as a health science professional and/or in translational health sciences.

Since the program began in 2015, BLAISER has accepted 74 alumni from colleges from across the country. BLAISER hosts between 15-20 participants each summer. BLAISER accepts undergraduate and recent graduate students with special attention to underserved groups. In order to be eligible for participation in the BLAISER program the student must meet the following requirements:

- ▶ Current Junior status or beyond
- ▶ Cumulative 3.25 GPA
- ▶ Special attention to Latinos, Native Americans and African Americans, populations that are underrepresented in the biomedical and health sciences
- ▶ Currently majoring in: biology, chemistry, physiology, microbiology, engineering, computer sciences and similar fields

In 2018, the selection committee accepted twenty students from seventy-two applications. The program offers a stipend, on campus housing for non-UA students paid by the program, six units upper division graded undergraduate research through BIOC492, Professional Medical College Admission Test (MCAT) and Graduate Record Examinations (GRE) preparation course, weekly lectures and other career development activities. Of the twenty students selected in this 2018 cohort, ten were male and ten were female. Six came from Haverford College, Arizona State University, Pima Community College and the remaining 14 students came from the University of Arizona. Students in the program attend the following activities that were developed in order to make them more competitive when applying to their Health Sciences career:

- ▶ **Scientist Laboratory.** Students paired up with faculty mentors from the *UA biomedical field who are working on translational research.*
- ▶ **Minorities Health Disparities Lecture Series.** Students attended to ten lectures focused in health disparities, which

BLAISER Students Share Program Highlights



Eric Bayman from University of Arizona described his experience as follows: *“I wouldn’t have been able to participate in Dr. Martinez’s lab without the help of the BLAISER coordinators. I learned lab research techniques such as PCR, electrophoresis, and creating a poster presentation. I also gained mental*

stamina from the focus required to correctly perform genetics experiments. This was my first research experience and I now have a much better idea of what kind of research I’m interested in. Having 30 hours per week dedicated to research also made me much more competitive for higher ranked medical schools. Dr. Martinez also showed me how he uses his lab, statistics, and clinical research to better understand the causes of asthma. I never considered a career in research, but after seeing how physician-scientists can incorporate patient care and make a lasting impact on the community, I’ll pursue research in medical school.”



Virnel Demby from Arizona State University said, *“The BLAISER program provided a lecture series throughout all 10 weeks. Almost every lecture was based on the topic of health disparities among minorities, and helped me and my colleagues to better understand the issues*

around us. Much of the information I gained from this series allowed me to open my eyes to a broader field of studies.”



“The program provided us with admission panels that were key to answer our questions and doubts about the skill sets needed to succeed in medical and graduate programs. I found these panels to be really useful since I was not fully aware of the many opportunities available in pursuing higher education like a Masters and PhD,”

Edgardo Guzman from UA stated.



BLAISER student, Anette Real-Arrayga, from UA, said, *“My poster is definitely my greatest accomplishment this summer. I put a lot of work into it and had to gain a lot of background knowledge in order to truly be able to do a project like this one.”*



2018 BLAISER students, Director, program coordinator and student worker.

were given by experts in their respective area of expertise.

- ▶ **Medical and graduate application processes.** Students also attended a Med School Admission Panel session with experts from the College of Medicine (COM) Tucson and Phoenix. They were informed about two different pathways for Arizona Residents to go to Medical School through Pre-Medical Admissions Pathway (P-MAP) at COM Tucson and Pathway Scholars Program (PSP) at COM Phoenix.
- ▶ **Pre-Health advising.** Students attended a personal session with a pre-health advisor from UAHS ODI to guide them through the right academic pathway
- ▶ **Preparation for the GRE and MCAT exams.** Students participated in workshops provided by Princeton Review for GRE, and for the MCAT preparation by UAHS ODI Learning Specialists.
- ▶ **Writing and to a Public Speaking Workshop.** The writing workshop enhance the development of their personal statement and the Public Speaking prepared them for the oral presentation of their research project.
- ▶ **Financial Aid Guidance.** Students learned all the financial requirements needed to go to Medical School
- ▶ **Research poster.** In collaboration with the students' mentors and the UAHS ODI Learning Specialists, they learned how to create a poster depicting their research project.
- ▶ **Travel to Nogales and Sells AZ.** In partnership with SEAHEC, two trips to these border towns were organized in order to learn about health disparities issues in this region.
- ▶ **Research Project.** In the last two days of the program, students presented their poster along with other summer programs through the UA Undergraduate Research Opportunities Consortium (UROC). On the last day, at the closing ceremony each student presented orally their project to their mentors, fellow lab peers, colleagues, friends and relatives. After their presentations, BLAISER students received recognition and certificate from the Director of the Program and the Associate Vice President from UAHS Office of Diversity & Inclusion.

The University of Arizona College Medicine – Phoenix Med-Start Health Careers Program

Francisco Moreno, MD; *Principal Investigator*
Lydia Kennedy, MEd; *Project Director*

Med-Start is an academic enrichment and health career exploration program offered in partnership with the Arizona Area Health Education Centers (AzaHEC) and The University of Arizona Health Sciences, Office of Diversity and Inclusion. Since 1969, Med-Start has attracted and prepared high school juniors from rural, border, tribal, and other educationally and economically disadvantaged communities. Med-Start supports Arizona and tribal nation high school juniors in preparing for their future careers in the health professions. Students are enrolled into college level courses including English, Chemistry, College 101, and Math while experiencing five-weeks of residential life on The University of Arizona campus. Med-Start students also participate in health career lectures, interactive tours in academic institutions and healthcare facilities, an academic conference, and conduct AHEC presentations. An important goal of Med-Start is to expand the “health professions” pipeline of diverse and culturally competent students by encouraging Arizona and tribal nation high school students from economically or educationally disadvantaged backgrounds as well as under-represented minority students to pursue careers in science and healthcare.

Applicants are recruited from communities across Arizona and surrounding tribal nations in collaboration with: Arizona Area Health Education Centers (AzaHEC), Eastern Area Health Education Center (EAHEC), Northern Area Health Education Center (NAHEC), Greater Valley Area Health Education Center (GVAHEC), Southeastern Area Health Education Center (SEAHEC), Western Area Health Education Center (WAHEC), University of Arizona-Indians into Medicine (INMED), University of Arizona-Early Outreach, Tucson College Night, Health Occupations Students of America (HOSA), Intertribal Council of Arizona (ITCA), League of United Latin American Citizens Annual Youth Leadership Conference (LULAC), Maricopa Community College District-Achieving a College Education (ACE) Plus Program, Mathematics, Engineering, and Science Achievement (MESA), Talent Search, Upward Bound, and other programs available for underserved populations. Arizona high school students, including students residing in surrounding tribal nations, who are currently in their junior year are invited to apply for the Med-Start Health Careers Program. A selection committee reviews and ranks applications, selecting students who demonstrate interest in pursuing a health career, top academic performance, student leadership experience, and community involvement.

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Med-Start

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In 2018, financial support was provided by the Arizona Area Health Education Center (AZAHEC) to cover the costs of Med-Start, supporting forty-one (41) students. Additional funding for the program and operations was provided by the University of Arizona-Office of Diversity and Inclusion, the DuVal Memorial Med-Start Endowment, Arizona Latin American Medical Association (ALMA) and private donors.

Following an extensive recruitment process during the Fall and Winter of 2017, we received 323 online applications for the 2018 Med-Start Health Careers Program. Following an extensive review and selection process by UA and AHEC representatives, 41 students were enrolled, and 41 students completed the program. Med-Start students represented 26 high schools from all regions of the state and the Navajo Nation: Alhambra High, Bradshaw Mountain High, Cibola High, Cienega High, Coconino High, Corona del Sol High, Douglas High, Foothills Academy College Preparatory, Gallup High, Ganado High, Gila Ridge High, Holbrook High, Ironwood Ridge High, Kofa High, Mountain View High School (Mesa), Mountain View High School (Tucson), Navajo Preparatory, Nogales High, Pueblo High, San Luis High, St Augustine, Tombstone High, Tuba City High, Tucson Magnet High, and Walden Grove High.

During the first week of the program, the Med-Start students met with regional Arizona Area Health Education Centers (AZAHEC) representatives including, Lupita Gonzales and Susanna Castro, Southeastern Area Health Education Center (SEAHEC); Marney Babbitt, Northern Area Health Education Center (NAHEC); Edgardo Figueroa and Brissa Garcia, Western Area Health Education Center (WAHEC); and Marni Rawiszer, Greater Valley Area Health Education Center (GVAHEC). The Arizona Area Health Education Centers (AHEC) Region Research Project Workshop provided an opportunity to meet and greet each of the five Arizona Area Health Education Centers (AHEC) representatives and to discuss the development of each region's team-based project. The AHEC projects were an important part of Med-Start; the students from each respective AHEC region created a health and community awareness project that will be implemented in each Arizona AHEC service area and marketed to further educate their community. The Arizona AHEC representatives met with their region's group of students and informed the students of the service objectives for their community. The following research projects were assigned to the students by their Arizona AHEC region representatives: NAHEC-Health Behaviors; SEAHEC-Opioid Awareness; WAHEC-Opioid Epidemic; GVAHEC-Juul Awareness in High Schools.

During the five weeks, the students and Med-Start counselors developed strong relationships with their Arizona

Med-Start Students Share Program Highlights

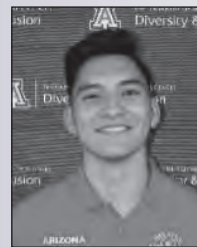


Med-Start student, **Aisha Reyes** from Cibola High School said, *"Med-Start was definitely a wonderful experience and I am extremely grateful that I was able to receive support from Arizona AHEC to attend this amazing program. I loved this experience and I have learned so much over these five weeks,*

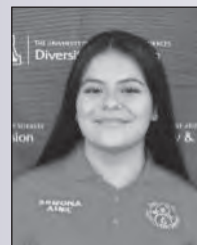
from how to suture and intubate someone, to how to budget your money."

Med-Start student, **Elexia Ramirez** from Kofa High School said, *"This program has made college more of a reality, than a slightly impossible option. Med-Start has geared me towards resources I never knew were available to me. After this program, I am more than confident in my capabilities and power to contribute to my community..."*

Med-Start student, **Christian Alexis Gomez** from Mountain View High School said, *"Through the connections and knowledge, I feel confident in myself to believe that I can*



succeed. I was pushed to my limits, out of my comfort zone, and was given the chance to show my capabilities... From every speaker, presenter, and teacher, I always took some lesson or piece of enlightenment that has helped me with my personal statement, choices, and absolutely information I trust will aid me in my future in pursuing medicine."



Med-Start student, **Yazmín Gonzales Almazán** from Pueblo Magnet High School said, *"Over these past few weeks that I have been in Med-Start, I have learned how to intubate, perform an ultrasound and have gotten the opportunity to refine my suturing skills... In addition, I also had the opportunity to*

be mentored by our incredible counselors who I know will be open to continue to support me in both successes and failures I will encounter along my path in the years to come."



Sally J. Reel, Director, Arizona AHEC Program, congratulates some of the 2018 Med-Start students at the closing ceremony.

AHEC representatives as this approach promoted detailed communication and enthusiasm. In addition, the students were instructed and guided in research methods by the University of Arizona Health Sciences Librarians. Yamila El-Khayat, MA, Annabelle Nuñez, MA, and Carol L. Howe, MD, MLS worked with the Med-Start students by providing reliable health information and access to trustworthy research resources. While the Med-Start students worked on their team projects, they also worked to become familiar with the many different health professions they may pursue. For example, while researching the many diseases the residents of their home communities encounter, the students gained knowledge about health disparities impacting different populations and regions and researched the health professionals responsible for approaching these issues.

Students participated in academic and hands on health career exposure activities during the five-week program including: writing essays, math preparation to increase their proficiency, chemistry, college application preparation, intubation, suturing, IV procedures, and trauma skills. This year, the Chemistry department provided a fun and interactive approach to learning the fundamentals of chemistry. During the chemistry course, the students emphasized the application of chemistry to solve a forensic problem. The students were presented with a fictional forensic science approach where they would analyze materials and complete procedures in order to advance their findings. The students experimented with weekly clues to solve an investigative case. Observations and data were recorded in lab notebooks to obtain enough information to identify the correct suspect of a crime.

The English 197A course component of Med-Start is an introduction to the types of reading, writing and critical analysis the students will be expected to complete in college. The course prepares the students in ways of thinking that are required to succeed in college. The students' interest in healthcare and medical science were strengthened by focusing the course on issues and topics encountered in the health Arizona professions. The students were required to engage in discussions to make the class more productive and fun.

The math component of Med-Start involved the students in using the Math Placement Test (Assessment) and ALEKS PPL. The purpose of using the ALEKS online program is to appropriately determine the students' mathematical background and current

mathematical abilities to place the student in the appropriate math course and allow them to advance their learning.

The College 101 course provided students with an academic enrichment experience to prepare them for college enrollment, guide them in their pursuit of careers in science and healthcare. The students participated in activities instructing them about online class technology, the college admission process, financial aid/scholarships and what college life is like. Students also learned about a variety of health profession careers with weekly career chats from health professionals. The Med-Start students had the opportunity to meet and speak with a Banner Hospital Administrator allowing them to gain knowledge about the hospital operations and logistics of the University Medical Group. Below are a few quotes from the 2018 Med-Start students describing their increased knowledge and motivation to pursue college and health careers:

On July 6, 2018, the students presented their Arizona-AHEC research health awareness community and their English course projects to the University of Arizona faculty, staff and community members and parents. These presentations illustrated some of the advances the students had made in inter-professional collaborative team building, and demonstrated the integration of mentoring relationships with Arizona AHEC representatives, Med-Start staff and instructors, while focusing on health topics relevant to their home communities. Both events were a success.

On July 7, 2018 the Med-Start students and their families celebrated their achievements at the closing ceremony. Med-Start students received a certificate of completion including certificates of recognition from the instructors. Dr. Francisco Moreno, Associate Vice President for Diversity and Inclusion, spoke to students about their value and importance in becoming health professionals to serve their communities. Our keynote speaker, David Lee, BSPHarm, who is a graduate of the University of Arizona College of Pharmacy and a Med-Start Alum 1974, spoke about his background and professional pathway. Med-Start students were inspired by the professional representation of this Tucson native.

By the end of the program, several Med-Start students decided to continue seeking opportunities to collaborate with the Arizona AHECs on their initiatives in reducing health disparities within their communities. They also decided to share the knowledge they had gained on their community's health disparities with members of their community and all Arizona AHEC regions. The UAHS-Office of Diversity and Inclusion is drafting a foundational teleconference-style project to regularly receive updates on the Med-Start students and the progress of their involvement in their communities. Students will speak about their experiences to audiences in their high school and assist in the recruitment process for the successive cohort.

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We are grateful for the continued collaboration with AzaAHEC and the AHEC regions for the successful completion of the 49th year of the Med-Start Health Careers program.



AzaAHEC Sponsorship of Faculty Development Seminar “Effective Clinical Teaching”

On June 2, 2018, College of Medicine – Tucson Faculty Tajal Parikh, M.D. and Paul Gordon, M.D. provided a Faculty Development Seminar designed to enhance knowledge of clinical teaching in various settings. Arizona AHEC sponsored this event that was designed for medical doctors, nurse practitioners, nurses and others. The workshop was offered in-person at University of Arizona College of Medicine – Tucson and remotely at Western Arizona AHEC (WAHEC) and Northern Arizona AHEC (NAHEC). Twenty individuals attended, and continuing nursing education credits were provided.



AzaAHEC Sponsorship of 45th Annual Arizona Rural Health Conference

Once again, AzaAHEC was proud to be a platinum sponsor of the 45th Annual Arizona Rural Health Conference in Flagstaff, Ariz. in July 2018. Registrants from across Arizona met to discuss rural health, foster collaboration, and report on Arizona programs and projects. The UA Mel and Enid Zuckerman College of Public Health, Center for Rural Health presents this annual event. The conference provides an environment to dialogue, network and attend educational activities regarding rural health. Each AzaAHEC Center Director provided an update of activity in their region.



WAHEC Center Director Edgardo Figuero presented information on the ongoing and new initiatives offered at WAHEC.

Intramural Grant Program

Since FY 2007, AzAHEC has supported innovative, interprofessional education programs and research through a competitive intramural grant program. In 2017-18, three grant programs were supported as follows:

- ▶ **Community Engagement Research Grant Program:** The purpose of this program is to foster meaningful community engagement for translating research into practice, reflective of the health needs of Arizona’s communities. This pilot program aims to stimulate the development and enhance the maturation of academic-community research teams capable of performing highly innovative, extramurally-fundable, community-engaged research that will sustainably contribute to the health and well-being of Arizona’s diverse populations.
- ▶ **Faculty Development Research Grant Program:** The purpose of this program is to support well-defined clinical or translational research projects leading to measured outcomes, such as preliminary data for an extramural grant submission. Preference is given to junior investigators and investigators undertaking a new area of focused research related to the UAHS priorities of health disparities, population health, precision medicine and neuroscience.
- ▶ **Research and Project Small Grant Program:** The purpose of this program is to provide UA health sciences graduate students, trainees and residents with an opportunity to gain experience in rural and urban medically-underserved Arizona communities through research and/or scholarly projects. Projects should demonstrate interprofessional education or practice models and address community needs specific to one or more of the AzAHEC regions of service.

New, continuing and completed grantees from the above programs are highlighted below.

Community Engagement Grants, Faculty Development Research Grants and Small Grants New (2017-18) and Continuing

Department/College	Principal Investigator	Project Title	Award Type
UA College of Medicine – Phoenix	Jennifer Hartmark-Hill, MD, FAFFP	Management of Hypertension & Diabetes in the Homeless Population: A Pilot Study	Community Engagement Research Grant (Continuing)
UA College of Medicine – Tucson	Monica Vandivort	A Community Paramedicine-Primary Care Partnership in Rural Cochise County to Improve Health Outcomes for Severely Ill Elders	Community Engagement Research Grant (Continuing)
UA Zuckerman College of Public Health – Phoenix	Celina Valencia	Saludable: Holistic Health Behavior Intervention for Latino Youth	Community Engagement Research Grant (New)
UA Zuckerman College of Public Health – Tucson	Ashley Lowe	The Epidemiology and Environmental Determinants of Childhood Asthma on the Navajo Nation: A Needs Assessment	Small Grant (Continuing)
UA College of Nursing	Georgina Amaya	Evaluating Pesticide Safety Knowledge and Behaviors in Hispanic Migrant & Seasonal Farmworkers of San Luis, Arizona Region	Small Grant (New)
UA College of Medicine – Phoenix	Amanda Aguirre	Early Child Intervention	Small Grant (New)
UA Zuckerman College of Public Health – Tucson	Stephanie Brennhofer	HIV primary care providers’ HPV vaccine promotion and anal dysplasia screening practices	Small Grant (New)
UA College of Nursing	Christina Wyles	Understandability and Acceptability of the NEC-Zero Espanol Toolkit for Families of Fragile Infants	Small Grant (New)
UA College of Medicine	Leopoldo Cobos	Nattokinase to improve insulin sensitivity and weight loss in women with obesity ± diabetes	Small Grant (New)

Community Engagement Grants, Faculty Development Small Research and Project Grants Completed in 2017-18

Department/College	Principal Investigator	Project Title
UA College of Medicine – Phoenix	Lisa Stoneking	Better Preparing Emergency Medicine Physician Trainees for Rural and Global Practice Settings: A Longitudinal component of University of Arizona’s South Campus Emergency Medicine graduate medical education curriculum
UA College of Medicine – Phoenix	Shalini Sharma, PhD	Role of splicing factor phosphorylation in the development of myeloid malignancies
UA College of Medicine – Phoenix	Anup Srivastava, PhD	MKK3-Mitochondria Interactions in Endothelial Activation
UA College of Medicine – Tucson	Joel Funk, MD	Identification of predictive genetic and histological markers in the progression of benign prostatic hyperplasia
UA College of Medicine – Phoenix	Martin Cisneroz, MPH	Development and implementation of a chest compressions-only CPR Spanish Video (See Report Page 30)
UA Zuckerman College of Public Health	Lidelisa Esquivel	Young Leaders Rise (See Report Page 31)
UA College of Medicine – Phoenix	John Streicher, PhD; Attila Keresztes, PhD	Investigation of synergy between cannabinoid-induced cancer cell sensitization and cell death via the activation of DR4 and DR5 death receptors
UA College of Nursing	Ruth-Taylor-Piliae, PhD	Novel Dual-Task Balance Challenge to Prevent Falls in Older Adults
UA College of Pharmacy	Tally Largent-Milnes, PhD	Sex Hormone Regulation of Sodium-Proton Exchangers: Relevance in Migraine

Development and Implementation of a Chest Compression-Only CPR Spanish Video

Martin Cisneroz, MPH
Principal Investigator

The initial drive to complete a project of this nature was to erase a resource gap within the Spanish speaking community that could potentially engage a health disparity seen in the literature. The resource gap was identified as educational materials in Spanish that covered out-of-hospital cardiac arrest and what public bystander rescuers can do to act during these stressful moments. This project aims to create a video series, lecture materials, and train students in delivering Chest compression-only CPR in Spanish.

We successfully completed a two-part series of videos that are short enough for people with limited time to take 3 minutes and learn. The first video demonstrates chest compression-only cardiopulmonary resuscitation (CCO CPR) and the indications for when to perform this maneuver. The second and longer video takes the next step to include an overview and brief tutorial on how to incorporate an Automatic External Defibrillator (AED) into the scenario of acting as a bystander rescuer. In addition to the videos, we also wanted to create a more formal way of delivering these live-saving skills in Spanish. Many times, organizations in our community desire in-person training rather than self-training internet videos, and this creates a unique opportunity to further the knowledge base within the Spanish speaking community in Southern Arizona.

Classes on and off campus have everything required to continue delivering in-person training sessions in Spanish. A total of eight

practice AEDs and four mannequins were acquired as part of the funding provided by the grant. Many of the training sessions were provided at community events such as the Tucson Rodeo, The Annual Book Festival, and the Tucson Gem and Mineral Show. These events create unique avenues to access even more Spanish speaking members in our communities. The project team has also successfully created a PowerPoint slide deck, CCO CPR pamphlets, and has created a partnership with the Sarver Heart Center for a newly offered resource to receive CCO CPR in a classroom setting, all created and delivered in Spanish. Classes are now being offered free of charge to the UA and Tucson community. Additionally, the project team has further collaborated with the UA College of Public Health-Phoenix, and the Commitment to Underserved People at the UA College of Medicine in order to provide more classes, training, and resources for Spanish language chest compression-only CPR.

Young Leaders RISE

Lidielisa Esquivel

Principal Investigator

Young Leaders RISE Summer Academy 2018 took place June 25-29th and it turned out to be a great success. RISE had the full support of the Santa Cruz County community, who joined with our staff to make this week memorable for each of the 47 students.



Young Leaders RISE participants proudly display certifications of completion

The RISE Program had two overarching goals: 1. Interest high school students aged 15-18 in serving as future health science professionals, 2. Increase physical activity among high school students, ages 15-18 in Santa Cruz County.



Young Leaders RISE learning about current public health issues

Through the collaboration of the Santa Cruz County School Superintendent's office, forty-seven participants were present throughout the course of the week.

Additional collaborators included SEAHEC, who provided mentorship and guidance in the development of the program; the Santa Cruz Center, who provided facilities for the program, including their chemistry and computer lab; Rotary Club who donated funds for the purchase of food; and Fitness Express.

Interactive activities focused on showing participants a snapshot of how public health serves in our communities. Seminars focused on teaching participants about real world public health issues such as the opioid epidemic, lack of access and resources for health care were presented throughout the course of the five days. The seminar leaders helped the participants think as health professionals by having them engage in critical thinking activities such as creating water filtration systems for third world countries or finding epidemiologic trends for different diseases. RISE also focused on exposing students to real world needs such as shortages of health care professionals in rural settings. Approximately 71% of the participants expressed post-event interest in serving in a public health capacity in a rural community.

It was very reassuring to see that 97% of our participants think RISE is worthwhile and important enough to recommend. Overall, we believe this pilot program was very successful and exceeded all expectations.

Regional Center Directors' Reports

Eastern Arizona Area Health Education Center (EAHEC) Activities

Workforce Development Summary - EAHEC

Type of Program	Participation
Pre-Collegiate (K-12) Health Careers Preparation Participants	1,114
Health Professions Trainee Experiences	140
Community Based Clinical and Experiential Training	132
Non-Clinical Community Training	8
Continuing Education Health Professional Participants	502
Community Health Education Participants	12,156



Jeri Byrne, BA, MS
Executive Director, Eastern Arizona Area Health Education Center

Eastern Arizona AHEC (EAHEC), based in Globe, Arizona, serves the rural communities of Graham, Greenlee, Gila and Pinal Counties. We are proud

to provide support at all points of the health professions pipeline including K-12, health professions students and practicing health professionals.

Scrubs Camps

EAHEC is very proud of continuing to sponsor a Scrubs Nursing Camp; this year a third camp was added.

Imagine being a young kid in a rural area with dreams of one day becoming a nurse, doctor, dentist, physical therapist, EMT... but not knowing much more about it than what you see on television or the movies. And then you hear the following announcement at school:

“Interested in nursing or a career in the medical field? Then SCRUBS Camp is for you! This innovative and hands on camp is for incoming 7th, 8th and 9th grade students interested in a medical career. Sponsored by the Eastern Arizona Area Health Education Center, Gila Community College Nursing Program and the Henry George Mackintosh Foundation, this unique 3-day experience will be held at the Gila Community College Campus and Cobre Valley Regional Medical Center in Globe June 6th-8th. Camp participants will learn how to draw blood, check vitals, CPR training, and hands on instruction from Gila County’s finest nursing, medical, and emergency response personnel!

Don’t miss this incredible opportunity to get a real hands-on medical field experience. For more information or to register please call....”

In collaboration with three local college nursing programs and health care workers from numerous local hospital and practices, EAHEC personnel welcomed a total of 84 students from the EAHEC region to three unique programs. The incoming 7th, 8th and 9th grade students were able to see just what a future health career entails.

Payson SCRUBS Camp was held June 4th-6th at Banner Payson Medical Center and Gila Community College Payson Campus, exposing 22 students to the health field. This is the third consecutive year of Payson SCRUBS, and because of such great feedback from past camps, a waiting list occurred this year. Over the three day period, students toured the local hospital through a scavenger hunt; saw the life-saving features in ambulances and fire trucks; dissected sheep hearts; learned how to take vital signs; learned how to give CPR; practiced TB injections, blood draws and IV’s; learned how to suture

using chicken legs and thighs. Students also got a better understanding of a Pharmacist’s job through a compounding experiment. They learned about dual-enrollment programs between their high school and local college leading to certification and AA degrees for future health



Payson SCRUBS camp members befriended a skeleton.

careers, The nursing instructors and students from the college, EAHEC staff, EMTs and Firemen, the hospital CEO and local medical staff from their community assisted throughout the camp.

Just as the Payson Camp was winding down, the **Globe-Miami SCRUBS Camp** began. This year's camp was held June 6th-8th at the Cobre Valley Regional Medical Center and Gila Community College Globe Campus. With Globe being the longest standing SCRUBS Camp, a total of 38 campers attended this year. Campers from various schools within Globe, Miami, San Carlos and Hayden-Winkelman School Districts attended and there is a long waiting list to attend.. Students were able to tour their local hospital, an ambulance and fire truck and learn about the jobs held within each environment. Campers also engaged in a hands-on activity to learn about germs in a



Globe-Miami SCRUBS camp members learned about suturing.

health care setting and how sanitizing a medical environment and hand washing is of utmost importance. Campers used mannequins for blood draws and injections, using unused expired donated from the local hospital and college nursing program. A tour of the local community college with a question and answer period was held. All campers rotated throughout numerous stations to have small group experiences to learn about and have hands-on experience with laryngoscope, blood pressure, ventilations, lung sounds, splinting, stop the bleed and much more. Hands-on CPR was taught and a C-spine demonstration was given. Campers learned about career opportunities in the dental field and were able to make their own dental impressions. Heart dissection and blood typing was taught and demonstrated by a local retired chiropractor turned college professor. Students enjoyed an awards ceremony followed by a barbeque on their last day of camp.

The third SCRUBS Camp held in the summer of 2018 was the **Thatcher SCRUBS Camp** on June 13th & 14th at Eastern Arizona Community College. The camp utilized the nursing program staff and students along with EAHEC staff and local medical field providers from numerous organizations. A total of 24 students from Graham and Greenlee Counties attended camp. Campers were able to have many opportunities to be hands-on through first aid training, learning how to take vital signs, learning about the differences of intramuscular, subcutaneous and intradermal injections utilizing oranges and hot dogs to practice. Campers used the moulage teaching to

understand the importance of emergency response and were able to mock cast one another. The hospital's local emergency helicopter ambulance team allowed campers onto the helicopter for an understanding of the similarities and differences between the ground emergency crew and the helicopter crew. CPR was taught using both adult and child mannequins, enabling campers to learn the difference in hand and mouth placement, etc. Raw chicken parts were used as a hands-on approach for campers to learn how to suture. A cadaver used to teach and train nursing students was observed and campers were given an in-depth understanding of the skeletal structure. At the end of the second day, campers reviewed all they had learned and demonstrated their newfound knowledge.



Thatcher SCRUBS camp members learned how to take vital signs.

While all three SCRUBS camps had the goal of igniting a spark in and exposing younger students to future health careers, each camp was unique to their area. It is with the teamwork of the local community college nursing programs, hospital and emergency response personnel as well as EAHEC staff and medical professionals within the Payson, Globe and Thatcher areas that our camps continue to be a success. It is the goal of all involved to bring awareness to young students about the opportunities a future health career can give them, with the hope that these students do in fact choose a health career and bring their knowledge and experience back to the desperately medically underserved rural communities that they come from. It is through this need, along with the participation and eagerness of so many college and medical personnel who believe in the purpose of SCRUBS Camp that this endeavor has become the success it is.

Diabetes Self-Management Education and Support (DSMES)

Hope Family Care Center in partnership with Eastern Arizona Health Education center (EAHEC) has developed a diabetes self-management education and support program that is recognized through the American Diabetes Association. These education services are now available community wide. Working with individuals' Primary Care Provider, EAHEC Board Treasurer Linda Clark, a certified diabetes educator, provides services promoting lifestyle changes at four critical time points. These time points are diagnosis, annually, when complicating factors occur, and during transition in care. Group classes encourage goal setting, sharing of life experiences and learn from others. Topics include nutrition, blood glucose monitoring, physical

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EAHEC

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activity, medications, behavioral changes, complications, problems solving, healthy coping, and goal settings. These classes equip persons with diabetes and/or their families with the knowledge to promote healthy lifestyle and successful self-management. The goal is to provide needed education and support for a person to make and implement realistic goals for taking control of their diabetes now and in the future. The program emphasizes that education is a lifelong process with the need for ongoing assessments of diabetes self-care behaviors and continual support. Most persons that complete the program lose weight, lower A1c's, lower LDL's and blood pressure and have a greater confidence in caring for their diabetes and overall health.

AHEC Scholars EAHEC Community Immersion Experience

The AHEC Scholars program in the EAHEC Region was a phenomenal success. During the weekend of August 24-26, 2018, AHEC Scholar fellows from the University of Arizona Colleges of Medicine – Phoenix, Nursing, Pharmacy, Public Health and Arizona State University College of Nursing & Health Innovation had a community immersion experience in the Globe/Miami, and San Carlos communities.



TANNER CARLSON, **Physician Assistant** *Why I chose to work in Globe AZ*

My name is Tanner Carlson, a recent Physician Assistant graduate from NAU. Two of my rotations were done at Hope Family Care in Globe, AZ. One of the rotations was a required pediatric rotation and the other was

an elective. After my first rotation it was in my mind that I wanted to work here if they were willing to hire me. It was because of this decision I chose to have one of my electives here later on to get more practice in this field and with this office and team. The staff here is amazing, very friendly and down to earth. Everyone always wears a smile and quick to crack jokes and make everyone else smile.

The owners of this facility were also a contributing factor of choosing to work at HOPE. Both Chad Campbell and Dr. Rooney are amazing people and are willing to teach and are patient. I enjoyed working with everyone so much. The small community and recreational opportunities are another major factor in choosing HOPE. Mountains, lakes, rivers and forests are all within a short drive. If the outdoors is a passion, Globe is a great place to live and work!

AHEC Scholar Fellows began their immersion with an informal tour of the local Cobre Valley Regional Hospital in Globe. EAHEC Board Members and the EAHEC Executive Director accompanied students in a tour of the community which enabled students to complete their “windshield” survey. Rich in history, the Globe/Miami communities come with an important historical backdrop. In Miami, AZ AHEC Scholars saw a town that has seen many changes due to economic changes, including some business closures that provided services for local community members. The Town of Miami has shown its resilience with antique shop owners buying and renovating local shops, which helped revive the downtown area for tourism. Housing, parks, libraries, schools, churches, and the community college were also included as part of the driving tour and provided a comprehensive picture of what life is like in our communities. AHEC Scholars were invited to the new San Carlos Hospital, where EAHEC Board Member Tanisha Morales gave a guided tour of the beautiful facility, highlighting the extent of services now available to residents who live in the area. A tour of downtown San Carlos rounded off the tour of the San Carlos Apache Reservation.

After Saturday lunch, students attended a panel discussion that included community members. The panelists included Chad Campbell, PA-C – Hope Family Health Care, Woody Cline – Gila County Supervisor District 3 – Lieutenant Wendsler Nosie, San Carlos Police Department and Ken Byrne, Mining Engineer. Students heard a perspective from each of the panelist regarding their particular role in the community as it relates to Social Determinants of Health. Students were engaged and interested in each of the panelists’ comments and were able to ask very appropriate questions of each.

On Saturday evening, panelists, board members and students gathered for a wonderful dinner in which Roberta Patten, EAHEC Board member, spoke to the group regarding the highlights of being a teacher at San Carlos schools and celebrated the success she had experienced as a 6th grade teacher. Linda Clark, EAHEC Board member and Certified Diabetes Instructor shared with the students a new education program that will be offered to the community for better outcomes for diabetic patients.

On Sunday morning, AHEC Scholars gathered at the EAHEC office to participate in a “Self-Care Stress Management” program that was taught by Jeri Byrne – EAHEC Executive Director. Students received information that would assist them in dealing with stress in a healthy and helpful way.

This weekend in August 2018 confirmed for some AHEC Scholars a commitment to want to work, and practice in a rural region. For others it was an eye-opening experience that rural Arizona has much to offer its residents. For EAHEC it was a renewed commitment to the important work we do every day to improve access to health care by arranging the opportunity for health professional students to experience first hand the challenges and satisfaction of working in a rural community.

EAHEC Board Members

EAHEC is so proud of our wonderful Board Members! In this year's reports, we are thrilled to highlight three of them in their important contributions to the community and their continuing pursuit of higher education.



Tanisha Morales

Tanisha Morales is a 20-year resident of Globe, Arizona who graduated from Globe High School with honors in 2004. Tanisha began her nursing career as a Certified Nursing Assistant at a local skilled nursing facility. This led to her pursuing an Associate in General Studies from Pima Community

College in 2011. Tanisha's love of healthcare propelled her into completing her Associates in Nursing from Eastern Arizona College in 2013 where she received high honors upon graduation. After obtaining her nursing licensure Tanisha was accepted into the Cobre Valley Regional Medical Centers' New Graduate Program where she gained knowledge over a 5-year span in medical-surgical and emergency room services. As an emergency room nurse, Tanisha decided to return to education and completed her Bachelors of Science in Nursing in 2016 from Walden University. With the ever-changing world of healthcare Tanisha decided to transform career paths and began a role as a nurse case manager at The San Carlos Apache Healthcare Corporation (SCAHC) in 2016. While employed at SCAHC Tanisha assisted in developing and expanding the nurse case management department, which began with a single personnel coordinating care to 300 patients in a month to now six specialty nurse case managers reaching 1500 patients monthly. Currently, Tanisha is furthering her knowledge of medicine by returning to college for her Master's in Family Nurse Practitioner (FNP) through Walden University with plans to graduate in 2019. Tanisha plans to remain in Globe, AZ upon graduation with her FNP and provide primary care services to her local community. Tanisha became an EAHEC Board Member in June of 2018. She was instrumental in the successful delivery and implementation of the AHEC Scholars Community Immersion in August of 2018 with an in-depth tour of healthcare at San Carlos Hospital in San Carlos Arizona.



Laura Dorrell

Laura graduated with her nursing degree from Eastern Arizona College in 2002. Previously, she had received her bachelor's degree from the University of Arizona in Molecular and Cellular Biology and General Biology. Laura decided to go back to school for her master's degree because she recognized that nursing and management of nurses

is changing, and she wanted to keep up. In August 2016, she graduated from the University of Arizona with a Master of Science in Nursing, Clinical Systems Leadership Emphasis. Laura says, "Going back to school to obtain my master's degree did not change what I am doing in my day to day job, nor did it increase my pay. I went back to school because I think my community deserves to have an educated nursing leader. Just because I live in a rural area does not mean my community doesn't deserve the best!" Laura has served on the EAHEC Board for seven years and is the current EAHEC Board President.



Kristin Grimes McCabe

Kristin Grimes has been a registered nurse for 12 years, having worked in many areas, including surgery, med/surge, ICU, ED, interventional radiology, critical access hospitals, pay-for-performance acute care hospitals, and ambulatory surgical centers. She has led and assisted in many quality

improvement initiatives leading to increased patient safety initiatives. She is currently finishing her last semester of her Masters in Nursing Leadership from Capella University in Minnesota. She plans to use this knowledge to further impact nursing leadership to promote safe patient care by implementing evidence-based practice interventions into current workplace culture at Mount Graham Regional Medical Center. She is especially passionate about Infection Prevention and Control and plans in obtaining her certification in Infection Control within the next 6 months. Kristen joined the EAHEC Board in June of 2018.

Regional Center Directors' Reports

Greater Valley Arizona Area Health Education Center (GVAHEC) Activities

Workforce Development Summary - GVAHEC

Type of Program	Participation
Pre-Collegiate (K-12) Health Careers Preparation Participants	2,013
Health Professions Trainee Experiences	95
<i>Community Based Clinical and Experiential Training</i>	68
<i>Non-Clinical Community Training</i>	27
Continuing Education Health Professional Participants	2,611
Community Health Education Participants	2,292



Martha McNair, MBA, RDN
Director, Greater Valley Area Health Education Center

Greater Valley AHEC (GVAHEC) based in Apache Junction, Arizona, serves the communities of Maricopa County of portions of west-central Pinal and south-central Yavapai Counties. We are proud

to provide support at all points of the health professions pipeline, including K-12, health professions students and practicing health professionals.

AHEC Scholars Program

This year GVAHEC was excited to participate in the preparation for our inaugural class of inter-professional AHEC scholars. In collaboration with the other AHEC centers and AzaAHEC we look forward to providing our group of ten students a community immersion experience in the Apache Junction area so they can get to know the challenges facing our community as well as our strengths. Coordinating with the three state universities Rural Health Professions Program directors opened new avenues for the expansion of not only the AHEC scholar program but the development of new rural sites and experiences for RHPP students. We are now in the planning stages of developing a nurse practitioner clinical experience with Pinal County Public Health.

Clinical Relationships

In an effort to prepare health professions students to more effectively provide health services to rural and underserved populations of Arizona, GVAHEC continues to solidify and strengthen our clinical partnerships. A variety of health professions students including medical and advance nursing practice have been placed with our clinical partners. GVAHEC continues to coordinate monthly Inter-Professional Educational (IPE) activities at the Wesley clinic, which include staff and health professions students from the fields of nursing, medicine, dentistry, dietetics

and others. Topics and cases are discussed in a “lunch and learn” format with emphasis on the contribution of each discipline as part of a team-based patient care approach. We are excited about future collaborative endeavors as we work to increase opportunities and experiences for health professions students.

Community Health Workers

GVAHEC continued to support the Community Health Worker Certificate Program at Central Arizona College. This year’s class has grown from 5 graduates to 15 graduates. GVAHEC helped sponsor two Pinal County Public Health employees to attend the year-long certificate program and also provided them with Chronic Disease Self-Management Program (CDSMP) lay-leader training.

Human Papillomavirus Grant

This fiscal year was our fourth year of participating in the HPV grant project through the National AHEC Organization and the Center for Disease Control. This year GVAHEC coordinated an Interprofessional viewing of the HPV-associated Oropharyngeal Cancer and Survivors’ Experiences of Treatment-Related Toxicity on the Phoenix UA campus with 12 students representing the CON, COP, COPH, COM and the ASU nursing program. After the webinar GVAHEC led a discussion on HPV vaccination and treatment related issues from the various discipline perspectives. As a result of our approach of integrating HPV content into Inter-professional education (a HRSA core topic area), GVAHEC was invited to apply for a special grant, which we received, for the creation of an HPV IPE toolkit to be distributed to other AHEC centers.

There is no better way to illustrate the impact of AHEC than to highlight an individual’s personal story of how our programs at the Greater Valley Area Health Education Center (GVAHEC) at Empowerment Systems, Inc. are making a difference. To that end, I would like to put some names and faces to our programs by sharing a few personal stories.

Tony Clarke

Tony Clarke first came to GVAHEC as a junior in high school through our partnership with the Medical Assistant program at Central Arizona Vocational Institute of Technology (CAVIT). During his junior and senior year, along with his classmates, Tony made several trips to our community resource center in Apache Junction where he helped distribute food boxes at Empowerment Systems' monthly Healthy Harvest and provided free health screenings to local community members. Tony graduated from the CAVIT program and began working as a certified MA. But his dreams were only beginning. Tony continued to volunteer with GVAHEC and started attending Grand Canyon University where he is now in his junior year as a pre-Physician Assistant student. In June, Tony participated in the GVAHEC health professions student internship program and served as a resident counselor at the week-long AzaHEC Future Health Leaders (FHL) camp for high school students interested in exploring health careers and experiencing life on a college campus. By sharing his own journey and insights, Tony was a role model and an inspiration to the FHL camp high school students. Tony's story weaves together the elements of the health professions pipeline goals of recruiting rural and under-represented high school students into the health care workforce and advancing career pathways.



Tony's experiences with GVAHEC illustrate how we connect students with opportunities to obtain community based experiential training. Tony says it best: "GVAHEC is a great organization

who has helped me in many ways. I participate in GVAHEC's monthly healthy harvest where food is given out to those who need extra food for their families. Doing things such as this is what I love and makes me want to come back to GVAHEC all the time. GVAHEC has contributed to my road to be a PA by providing me people who I can network with, internships, volunteer opportunities, and continuing education. Without GVAHEC's help I wouldn't be a step ahead into my future career of being a Physician Assistant. Thank you GVAHEC!"

Adrienne Rivera

Here As a summer intern, Adrienne came to the GVAHEC inter-disciplinary internship through our partnership with the Chandler-Gilbert Community College dietetics program. Adrienne was born and raised in Arizona and is a Native American from the San Carlos Apache Tribe. She lives in the Gila River Indian Community (GRIC) with her husband and



five children and works at the GRIC Saint Peter Indian Mission School. Adrienne is currently completing her practicum hours so that she can become a registered dietetic technician. With the support of her employer, who saw her drive and commitment to the health of their students, Adrienne's goal is to become the school's foodservice director.

We were very fortunate to have Adrienne as an intern to participate in many of our summer youth programs. She was on the team of GVAHEC students who organized and presented the "Food Box Chopped" event at FHL camp and she helped developed a nutrition class for the Maricopa Integrated Health Service summer lunch program at four family learning centers. Adrienne was also a key participant in a new collaboration with the University of Arizona, Office of Diversity & Inclusion. GVAHEC helped coordinate Native Health Professions Day on the University of Arizona, College of Medicine – Phoenix Biomedical campus aimed at Native American high school and community college students. Adrienne was one of several Native American health professions students who shared their experiences about college, personal goal setting, and selecting a health career.

Airen Fortunato

GVAHEC partners with numerous high school health career pipeline programs including HOSA, summer scrubs and Med-start. We strive to be inclusive and provide meaningful experiences for all students including those who face challenges in any form. Airen Fortunato is a sophomore at Maricopa High School and was able to attend the University of Arizona, College of Medicine- Phoenix Biomedical Campus Summer Scrubs program as a result GVAHEC's financial support. Airen has a diagnosis of high functioning autism as does his sister. His family is on a tight budget so paying for a summer camp like summer scrubs, according to Airen's mom Karen Fortunato, "is definitely not in our budget"... it's because of Greater Valley Area Health Education Center's generous support to the program that Airen attended on a full scholarship."

Regional Center Directors' Reports

Northern Arizona Area Health Education Center (NAHEC) Activities

Workforce Development Summary - NAHEC

Type of Program	Participation
Pre-Collegiate (K-12) Health Careers Preparation Participants	520
Health Professions Trainee Experiences	477
Community Based Clinical and Experiential Training	474
Non-Clinical Community Training	3
Continuing Education Health Professional Participants	3,940
Community Health Education Participants	7,430



Marica Martinic, MPH
Director, Northern Arizona Area Health Education Center, North Country HealthCare

Northern Arizona AHEC (NAHEC) based in Flagstaff, Arizona, serves the communities of Apache, Coconino, Navajo Counties as well as portion of Yavapai County. We are proud to provide support to all points

of the health professions pipeline including K-12, health professions students and practicing health professionals.

NAHEC/North Country HealthCare (NCHC) saw a lot of growth and change this year. Our long-time Director, Sean Clendaniel resigned and we welcomed Marica Martinic to the role. The first year of the AHEC Scholars Program began and we initiated an advisory committee for the Native American communities we serve. We completed our first year of a structured outcomes evaluation plan and completed two workshops promoting healthcare practice transformation. At the same time, we maintained our annual programs, including the Future Health Leaders (FHL) camp at Arizona State University, the third year of Northern Arizona University's Journey for Underrepresented Medical Professionals (JUMP) program, Med Start, and Girls on the Run.



Marney Babbitt-Pierce, Program Coordinator, stands with Med Start students from the NAHEC region)

We graduated our eighth year of ATSU School of Osteopathic Medicine in Arizona (SOMA) students from the Flagstaff community campus and seven out of ten matched to primary care-related residencies including four in family medicine. Here are a few program highlights from the past year:

AHEC Core Topic Areas

This year marked the start of a new five-year federal AHEC contract, with some changes including the additional of six core topic areas to be integrated into existing programs: social determinants of health, integrated behavioral health, interprofessional education, cultural competency, practice transformation, and current and emerging health issues. NAHEC/NCHC works frequently in all of these areas, but a few projects are worth spotlighting:

Social Determinants of Health – The AHEC Scholars Program

The AHEC Scholars Program (ASP) is a two-year, enrollment-based program for graduate students in different healthcare disciplines which exposes them to the unique health environments across different regions of the state. The ASP is another new initiative for all AHECs nationwide, and we kicked our program off with community immersion experiences in each AHEC region on August 24-26, 2018. While the scholars will work with all six core topics, the immersion focused on a windshield survey to help students understand the social determinants of health that affect the way individuals access healthcare services and optimize their health overall. In NAHEC, we completed two surveys—one in Flagstaff where the students witnessed significant disparities related to housing issues and homelessness, and another in Tuba City where geographic isolation and unemployment are major health concerns. The students took tours of the North Country HealthCare federally-qualified health center and the Tuba City Regional Health Care Corporation hospital, and had a vibrant discussion about the social determinants of health using North Country's Health Partners model as a basis. This hands-on experience was both fun and informative for the students as they start their programs.

Practice Transformation – Achieving Meaningful Results Workshop

In collaboration with the Arizona Biomedical Research Commission, Northern Arizona University Center for Health Equity Research, and other regional partners NAHEC put on two workshops titled “Achieving Meaningful Results: Producing Effective Small Scale Quality Improvement, Evaluation and Research Projects with Limited Resources.” The workshops occurred in Flagstaff and Kingman and were available through live video conferencing. The 65 participants represented health-care, county health departments, non-profit organizations, and academic institutions.



Ali Gabriel, PhD presents about Project Charters at the Achieving Meaningful Results workshop



Ariana Tyler, Program Specialist and interns Iain Vidaurre and Randy Rizo assist remote attendees during the Achieving Meaningful Results workshop

Presenters shared their expertise on Change Management, Plan-Do-Study-Act, Logic Models, and Rapid Assessment, Response and Evaluation (RARE) while providing participants a step-by-step process for designing and implementing a small scale project to transform healthcare practice in their institutions. Presenters provided examples of such projects and shared best practices for social service and health organizations with minimal research capacity or infrastructure. Participants were encouraged to ask questions throughout the workshop and the final segment called for individuals to work together to review their project charter, and choose their methodology with guidance from experts.

Interprofessional Education – NAHEC’s Comprehensive Program

Now in its fifth year, our interprofessional education (IPE) program focuses on developing activities and events that improve patient care. One of our objectives is to enhance students’ under-

standing of other disciplines’ scopes of learning and practice, as well as to provide opportunities for these students to learn from and teach each other skills and perspectives on improving patient care through a team-based, interprofessional model. Our IPE curriculum focuses primarily on nurse practitioner, physician assistant, pharmacy and medical students. This year the IPE activities included Med Skills, which partnered Nurse Practitioner (NP) and second year osteopathic medical students (OMSII) for 18 sessions ranging from immunology, to motivational interviewing, to pediatric exams with live models.

We also conducted a brown bag lunch discussion of medications used in pregnancy and women’s health and a one-day simulation lab focused on team approach to a patient in cardiac arrest. In January, teams of NP and OMSII students attended half day clinics at a long-term care facility administering mental status exams and learning about fragile geriatric populations. In April, we organized a pilot project with a broad team of students for three weekly one and a half hour sessions where students approached a challenging pediatric patient scenario together, and created management plans and team-based care together. In total approximately 33 student learners participated in our IPE programs.

Native American Health Professions Advisory Committee

The Native American Health Professions Advisory Committee (NAHPAC) began this year and has the purpose of providing a platform to discuss the current state of health care professions in Native American communities in the NAHEC region and provide suggestions and feedback on how we can improve those areas. A planning meeting was held in July to plan the committee’s focus for the next 12 months. The committee currently has representation from two health care facilities on the Navajo and Hopi reservations, a current pre-med student, University of Arizona Indians into Medicine program, and Dine College. Seven areas were identified during a consensus building activity, which included establishing a youth coalition, assessing trends and sustainability, developing a mentorship model, defining partnerships, assessing existing resources, promoting education and outreach, and creating a career planning model. Three areas were given priority to be focused on over the next 12 month period, including developing a mentorship model, assessing trends and sustainability and defining partnerships. The NAHPAC will begin working on specific action items in the three areas over the next year.

NAHEC Evaluation

This year, NAHEC initiated an outcomes evaluation plan for the three core service areas of Youth Career Preparation Programs, Health Professions and Continuing Education (CE/CME). A logic model was created to determine the short-term outcomes to be measured and analyzed which would logically lead to the intended impact of increased underrepresented minorities as health care providers, decrease of provider vacancies in rural area clinics and ultimately improved health outcomes for those living in rural/underserved areas.

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NAHEC

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Evaluation tools were created for each of the core service activities. For Youth Career Preparation Programs, we measured a number of factors that are indicative of likelihood of success in health career education, including: perception of the importance of teamwork; knowledge of the health care system; knowledge of health careers; confidence in skills to succeed in higher education; and positive attitude of “science identity.” The Health Professions evaluation includes pre- and post-surveys completed prior to and at the conclusion of the student’s rotation. The key areas measured include: reported knowledge of underserved populations; positive perception of rural healthcare practice; confidence in working with rural and/or diverse populations; and knowledge within four areas of interprofessional education (teamwork, roles and responsibilities, ethics, and communication). The existing participant satisfaction survey for CE/CME activities was revised to include two key questions that measured perception of knowledge gained in key topic areas and confidence in applying key topic areas to patient care practices.

Due to a relatively short collection period this year a full analysis of the evaluation results is not available, but preliminary findings include:

- ▶ An increase in the overall average for reported knowledge in areas of healthcare roles, healthcare delivery, requirements of education goals and science identity in Youth Career Preparation students, particularly those who identified as female (Figure 1)
- ▶ An increase in the overall average of reported knowledge and confidence in working with rural/underserved populations for Health Professions students
- ▶ A decrease in the overall average of perception that rural healthcare providers are less satisfied and experience a quality of life that is less than urban providers for Health Professions students (Figure 2)
- ▶ Continuing Education activities that covered social determinants of health, cultural competency, and behavioral health integration (AHEC core topics) had a large percentage of participants who reported the activity enhanced their ability to better serve their clients/patients and increased the knowledge of the health of rural/underserved populations
- ▶ Of those CE participants in the listed core topic area activities, 49% currently worked in a rural area, 61% worked in a medically underserved area, and 48% worked in a primary care setting.

We are pleased with these preliminary findings and look forward to continuing the data collection and analysis into future years to better understand the impact we have in the communities we serve.

Figure 1. Reported knowledge of factors indicative of likelihood of success in a healthcare career for Youth Health Career Preparation students, 2018

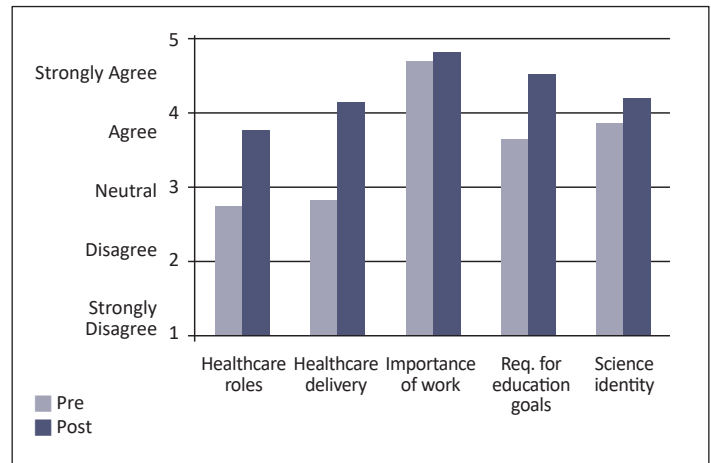


Figure 2. Reported perception of rural health practice for Health Professions students, 2018

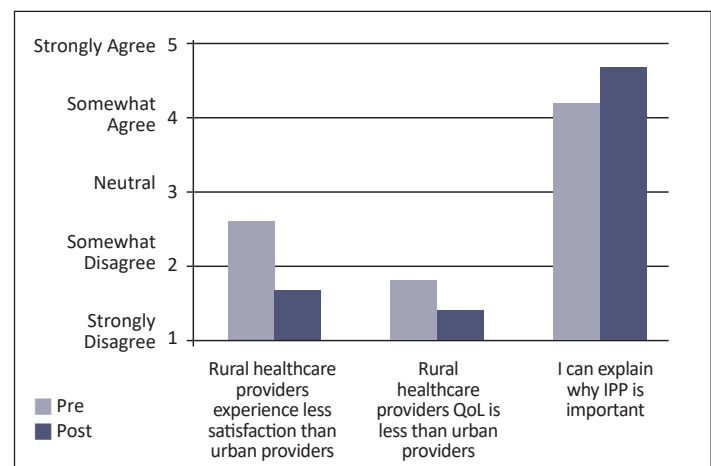
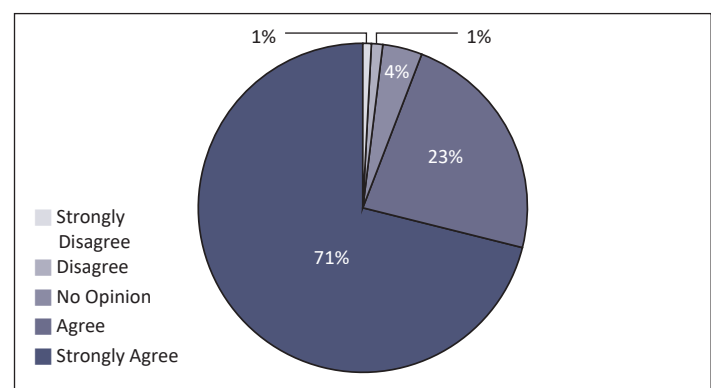


Figure 3. Reported relevance of program content to improving patient care for Continuing Education participants, 2018



Regional Center Directors' Reports

Southeast Arizona Area Health Education Center (SEAHEC) Activities

Workforce Development Summary - SEAHEC

Type of Program	Participation
Pre-Collegiate (K-12) Health Careers Preparation Participants	635
Health Professions Trainee Experiences	211
<i>Community Based Clinical and Experiential Training</i>	183
<i>Non-Clinical Community Training</i>	28
Continuing Education Health Professional Participants	820
Community Health Education Participants	1,437



Gail Emrick, MPH
Executive Director, Southeast Arizona Area Health Education Center

Southeast Arizona AHEC (SEAHEC) based in Nogales, Arizona serves the communities of Cochise, Pima and Santa Cruz Counties. We are proud to provide support to all points of the

health professions pipeline including K-12, health professions students and practicing health professionals.

Summary of accomplishments/highlights

SEAHEC has had an amazing year of accomplishments, among them the opening of a rural community center in rural Cochise County, to serve as a hub for health professions student training and community development. As well, through our high-school based health career clubs, SEAHEC and partner agency, the Cree Project, conducted Opioid Awareness and Prevention throughout high schools in Cochise County. Our poster highlighting our

FHL club partnership with the UA Skin Cancer Institute's Project SASS – "Students are Sun Safe," was awarded 2nd place recognition at the annual National AHEC conference, in Crystal City, Virginia this summer.

Speaking of awards, SEAHEC's own Suzanne David received the 2018



Gail Emrick presents award-winning poster at NAO

Goodfellows Award at Annual Trauma conference in Tucson, in recognition of her dedication and passion for EMS and trauma education in southern Arizona. Previous Goodfellows Award winners include UA Medical Center's Peter M. Rhee, MD, MPH, and Dan Judkins-RN. Finally, with the dedication and determination of SEAHEC Coordinator for Student Training Opportunities, Erin Sol, SEAHEC placed over 200 health professions students in a variety of challenging rural and border settings, among these is our newly established community center in Winchester Heights, an unincorporated community in Cochise County.



SEAHEC and UA Frontera students work with Winchester Heights residents to build the playground.

SEAHEC HEALTH FARMS WINCHESTER HEIGHTS COMMUNITY CENTER PROJECT

This year, the Southeast Arizona Area Health Education center and partners, UA Mel & Enid Zuckerman College of Public Health, Cochise Health & Social Services, Chiricahua Community Health Center, Inc. (CCHCI) and Project PPEP,

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SEAHEC

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inaugurated a new community center for the colonia of Winchester Heights, near Willcox in Cochise County Arizona. Community center construction was funded by the Legacy Foundation of Southeast Arizona and the Vitalyst Health Foundation, as well as by individual donors. Support for project oversight and student internship placement was provided by the Arizona Area Health Education Centers Program (AZAHEC.)

The inauguration ceremony for the Winchester Heights Community Center and “We Heart Children” Children’s Memorial Park held in August, represented years of dreaming, planning and hard work by SEAHEC, students, partners and community members alike.

The History of SEAHEC’s Healthy Farms Program

The long awaited community center is a product of SEAHEC’s Healthy Farms Program, founded as a community health initiative in 2009. The initiative’s goal is to reduce health disparities in southeast Arizona’s underserved rural communities by improving access to health information and services. SEAHEC’s strategy is driven by the Arizona Area Health Education Center (AZAHEC) healthcare workforce development model, which includes placing health professions students in rural internships and the recruitment and training of community members to become Community Health Workers (CHW.) To date over 20 UA health professions students – from public health and nursing, to medicine and pharmacy, and two public health students from Columbia University and Mt. Sinai respectively, have served as interns and volunteers with SEAHEC in the Winchester Heights community.

SEAHEC’s Healthy Farms Program created a small-scale farmworker oriented community health worker team. Presently, there are five CHWs actively being trained by former UA nursing student and SEAHEC intern Lauren Acosta (see sidebar)



Lauren Acosta, PhD, a former UA nursing student and SEAHEC intern, helped developed SEAHEC’s CHW training manual. Now an Assistant Clinical Professor at Northern Arizona

University’s Tucson Campus, she has returned this year to continue working with the Healthy farms CHWs.

Community Health Workers (CHWs), are also known in Spanish as Promotores de Salud. CHWs are defined by the American Public Health Association as “frontline public health workers who are trusted members of and/or having an unusually close understanding of the community served. This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.”

SEAHEC recruited members of the Winchester Heights neighborhood to train and work with SEAHEC public health and nursing interns. They collaborated on developing a training manual based on community identified health issues, and organized a series of workshops based on the new manual. The team then shared what they had learned with community members by organizing home visits, workshops and informal information sessions in the work place.

The team was launched in 2013 and since then, CHW efforts have expanded from disseminating health information to helping the community build its collective capacity to establish a health support infrastructure. SEAHEC CHWs and interns collaborated with CCHCI to establish a health services referral system. Then they worked with SEAHEC to install bus shelters for local schoolchildren and organized the community’s first public health fair. A persistent barrier to engaging the entire community of 600 in the process of working to improve community health has been lack of space for people to assemble. As expectations grew for more participation and the desire for concrete and lasting changes to community infrastructure, the residents requested SEAHEC’s help to develop and construct a community center, so they could engage in larger scale projects.



Rietta Wagoner, MPH, is an Environmental Health Research Specialist at the University of Arizona, College of Public Health. She directed the research for the 2017 CEHA.

Construction planning began in 2017 along with a concurrent Community Environmental Health Assessment (CEHA) project led by UA doctoral in public health student Rietta Wagoner (see sidebar). The CEHA provided data for community health education topics and for the community to use to prioritize and address health issues. SEAHEC and UA MEZCOPH are also engaged in a subsidiary project to improve drinking water quality, one of the top community priorities identified in the 2017 CEHA. Other identified priorities include Neighborhood security, Sanitation, Work environment, and Air quality.

These priorities are a stepping stone to building community capacity to collaborate on acquiring, and managing public infrastructure. The foundation of this capacity will be an expansion in focus for CHW training

and community education from health topics to include community advocacy and organizing skills, which residents will develop through collaborating to address priorities identified in the CEHA, and learning to manage and sustain their new community center.

A former UA FRONTERA student, Linda Cifuentes, now serves as SEAHEC’s Program Coordinator for Community Capacity Building. Under Linda’s guidance, SEAHEC has helped residents establish a Community Action Board, which is addressing key health priorities as well as preparing for future administration and sustaining the community center. Committees include anti-vandalism, clean up and maintenance, among others.



Linda Cifuentes holds a Master’s in Global Health from the University of Geneva. She is SEAHEC’s Community Capacity Building Coordinator. She is working with the Winchester Heights Community Action Board, to help them implement their sustainability plan.

The key to community development is child health and development. With that in mind, SEAHEC and community members conceptualized a playground for fostering a culture of active living focused on family involvement. The playground is a core feature of the new community center and was named “We Heart Children-Burris Children’s Memorial Park” in memory of Jake & Jessica Burris, both of whom died of a young age due to heart conditions. Their sister Michelle Jeanee Burris, a SEAHEC intern and Business Administration student has raised nearly \$2,000 through GoFundMe for playground equipment for the Winchester Heights community. Future plans include child-centered learning, activities and games – among them involvement from UA Cooperative Extension and gardening, ESL classes, and more.



Winchester community members

THE SIGNIFICANCE OF THE WINCHESTER HEIGHTS COMMUNITY CENTER

Unsurprisingly, the infrastructure deficits Winchester Heights residents face are not uncommon in the Southwest. Nearly half a million people in Arizona and New Mexico alone, live in unincorporated neighborhoods designated as *colonias*: rural communities within 150 miles of the US/Mexico border whose main characteristic is lack of infrastructure needed to support public health. SEAHEC’s Healthy Farms Program provides a replicable model for addressing root causes of the persistent public health problems colonia residents’ face: lack of community capacity to address infrastructure deficits. At the same time, Healthy Farms’ training opportunities for health professions students and community health workers helps to build our rural health care workforce.

Regional Center Directors' Reports

Western Arizona Area Health Education Center (WAHEC) Activities

Workforce Development Summary - WAHEC

Type of Program	Participation
Pre-Collegiate (K-12) Health Careers Preparation Participants	2,745
Health Professions Trainee Experiences	237
<i>Community Based Clinical and Experiential Training</i>	237
<i>Non-Clinical Community Training</i>	0
Continuing Education Health Professional Participants	316
Community Health Education Participants	8,533



Edgardo A. Figueroa, BA
Director, Western Arizona Area Health Education Center

Regional Center for Border Health, Inc./ Western Arizona Area Health Education Center (RCBH/WAHEC) is proud to present its 2017-18 achievements. RCBH/WAHEC strives to improve the quality of

life of the residents along the U.S/ Mexico border. We serve the communities of Yuma, La Paz and Mohave Counties by increasing accessibility to quality training and affordable healthcare. Our headquarters are located in Somerton, AZ.

Health Professions Programs

RCBH/WAHEC College of Health Careers is dedicated to establishing a pipeline for “Growing Our Own” health care workforce in Western Arizona to address healthcare workforce needs. The mission is to engage local healthcare industries and address their healthcare workforce needs. RCBH/WAHEC and



College of Health Career students and family members from LaPaz County celebrate their graduation.

the College of Health Careers have Affiliation Agreements with local medical facilities, assisting living centers, restaurants, pharmacies and behavioral health agencies where students conduct their practicum experiences after completing required classroom hours. The College of Health Careers offers training programs for Medical Office Specialist, Nursing Assistant, Medical Assistant, Pharmacy Technician, Nutrition and Food Service Management, Phlebotomy Technician and Care Giver, and 295 students graduated from these programs in 2017-18. RCBH/WAHEC College of Health Careers have over 50 affiliation agreements with local organizations in Yuma, La Paz and Mohave Counties to place students to conduct clinical rotations in areas where medical professionals are needed.



RCBH/WAHEC College of Health Career Students have practicum experiences.

A total of 237 students completed 21,473 rotations hours during 2017-18 with 75% of the hours completed by students within the College of Health Careers. As detailed on Page 3, additional rotations were completed by students from the University of Arizona, Arizona State University, Northern Arizona University, and other institutions.

SPECIAL INITIATIVES

Amanda Aguirre, President and CEO of Regional Center for Border Health, Inc. strives to improve and empower the lives of the rural communities she serves. This year a special project was implemented for the very first time with the AZTEC High School in Yuma County. This charter school is under the umbrella of the Yuma County Juvenile Justice Center. Five (5) high school students graduated from the Nursing Assistant Class offered by the College of Health Careers on May 24th, 2018. This was a very successful pilot project; our goal is to have more of these courses offered to high school students. Another great and successful project was the newest expansion to our services. The *Center for Children with Special Needs and Autism* opened its doors on March 9, 2018. This unique interdisciplinary center brings behavioral health intervention and treatment services to the families with children with special needs and autism. Graduate students will have the opportunity to rotate and learn about other fields of intervention and develop a comprehensive care plan for the child with special needs and children with Autism. The interdisciplinary team includes a psychology, speech pathology, nurse practitioner psychiatry, dietician, pediatrics, social work, physical therapy, occupational therapist and applied behavioral analysis (ABA).



RCBH/WAHEC is happy to celebrate its 20th anniversary for “Nuestros Niños/Nuestra Comunidad” Healthcare Community Household Census and Immunization Leadership Campaign in the border communities of San Luis, Gadsden, Somerton and Yuma, Arizona. The RCBH’s outreach campaign is a six-week door-to-door community-based census designated to identify and collect information from underserved/disadvantaged families by working with a cadre of Community Outreach Workers/ Promotoras and High School Students, participating in the summer Youth Leadership Training Program. The “Nuestros Niños” Program is based upon a census system used in Mexico utilizing the AGEb (Geographical Statistical Area) as the primary census area. Promotores target specific neighborhoods on a daily basis and try to contact as many households as possible. A total of 16 students were sponsored by RCBH/WAHEC in Yuma County for the summer 2018. Additionally, Nuestros Niños students also participated in the Asthma Camp supported by RCBH/WAHEC. The goal of the Annual Camp Not-A-Choo is to teach children with moderate to severe asthma the self-management techniques that will help them control their asthma in a fun and exciting camp setting. A total of 12 children participated in this event. These children were identified and referred by their medical providers.



SUMMER PROGRAMS

RCBH/WAHEC strives to support community youth through multiple summer programs:

WAHEC partnered with the University of Arizona College of Medicine Office of Diversity and Inclusion and other AHEC Centers for the, Med-Start Health Careers Health Program. This summer academic enrichment program for any 11th and 12th grade Arizona high school student interested in a health career. Students participated in the program during their summers between their junior and senior years. RCBH/WAHEC sponsored and provided support for 11 students.

Another great summer program is the FHL Summer Camp. This week-long program is for current high school freshman, sophomore and juniors interested in becoming health professional leaders. RCBH/WAHEC provided support and sponsored 8 students. This year the event took place at the ASU downtown campus. Over 40 students participated from different parts of the state.

HOSA State Leadership Conference

RCBH/WAHEC is a proud sponsor of Health Occupation Students of America (HOSA) Clubs in Mohave, La Paz and Yuma Counties. A total of 349 members participated through HOSA Clubs during the 2017/2018. HOSA Clubs include: San Luis, Kofa, Cibola, Antelope Union, Kingman I, Parker and Lake Havasu City High Schools. RCBH/WAHEC offer numerous activities to participants. Antelope HOSA club students toured the new Regional Center for Border Health facility and practiced hands on patient care skills and more. Lake Havasu HOSA club students participated in a CPR class and. 16 students received CPR Certification. RCBH/WAHEC provided support to the various HOSA Clubs to attend the Annual State Leadership Conference in Tucson, AZ, from April 2nd to the 4th, 2018; over 2,000 students from around the state that attended this event. Students from Kingman, Kofa, San Luis and Cibola High Schools participated in this competitive event. Three students from Kingman High School placed top for their events, which earned them the right to attend the International Leadership Conference which occurred in Dallas, Texas in June. Each student walked completed these HOSA events with a feeling of confidence and pride in their performances.

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WAHEC

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CONTINUING EDUCATION

Regional Center for Border Health, Inc in partnership with the American College of Rheumatology, Lupus Initiative, and the Western Arizona Health Education Centers (WAHEC) Stands for Jobs hosted the ‘Lupus Education and Networking Event’. This opportunity was offered to medical providers in Yuma county that are eager to assess their knowledge about Rheumatology and enhance their patients care. The participants had the opportunity to learn from Dr. Sherif A. Nasef. Dr. Nasef, a Rheumatologist, ia a graduate of Cairo University School of Medicine and completed his rheumatology fellowship at the University of Tennessee-Memphis. He holds an ABIM-Rheumatology certification and has participated in extensive research, scientific presentations, and publications. Through his work, Dr. Nasef has received many honors and awards, including a humanitarian award from Yale-Bridgeport Hospital in 1997.

Youth Mental Health First & Trainings

Regional Center for Border Health, Inc. / WAHEC continues to advocate for mental health throughout Yuma, La Paz and Mohave County. Beginning in October 2013, RCBH/WAHEC collaborated with AmeriCorps National Community Service Network to deliver the various mental health awareness and prevention curriculums. RCBH/WAHEC has sponsored four instructors to obtain National Instructor Certification as Mental Health First Aid Facilitators. The course introduces common mental health challenges for youth, reviews typical adolescent development, and teaches a 5-step action plan for how to help young people in both crisis and non-crisis situations. Topics covered include anxiety, depression, substance use, disorders in which psychosis may occur, disruptive behavior disorders (including AD/HD), and eating disorders. The youth curriculum focuses on prevention. The Adult Mental Health First Aid also teaches the 5—step action plan and how to help adults both in crisis and no-crises situations. Both courses are taught in English and Spanish by WAHEC instructors. Instructors provide training to specialize groups such as Public Safety, Higher Education, Military Families, Rural Audiences, and Older Adult Population.

OTHER COMMUNITY EVENTS

RCBH/WAHEC is currently working with U of A Cooperative Extension in a nutrition and wellness program. The program utilized is approved by the Center for Disease Control and Prevention, Diabetes Division. The curriculum is called “Prevenga T2”. Moreover, RCBH/WAHEC hosted two students from U of A under the supervision of Ms. Amanda Aguirre to complete their capstone coursework on eating healthy and nutrition. RCBH/WAHEC looks forward to the collaboration and partnership with UA Cooperative Extension in Yuma and La Paz County.



Stories of Success



Gustavo Alvarez, B.S.

(Nuestros Niños Class Summer 2003)

“Nuestros Niños/Nuestra Comunidad Summer Youth Leadership Program helped me define my career goals in the medical field industry. I always knew that I wanted to be involved in quality patient care. Fifteen years later, I became a Health Program Coordinator

with Regional Center for Border Health, Inc. I attained my bachelor’s degree and am currently working on my master’s degree in Public Health. The best part of working with RCBH is that I can lead many programs, including “Nuestros Niños/Nuestra Comunidad” summer program, outreach programs

and activities. It is a great satisfaction to contribute to this beautiful community.”



Jovanna Flores, B.S.

(Nuestros Niños Class Summer 2012)

Regional Center for Border Health has helped me in many ways, from volunteering to internships. One of them was when I attended Nuestros Niños Summer Youth Program. I never really thought of working with a clinic or anything involved with medicine, I always thought I wanted to

work for a big corporation. I attended ASU and did a bachelor’s in computer information systems and when I finished I wanted to come back here to help the organization that has helped me become a more independent and empathetic person. Nuestros Niños showed me how fun and interesting the medical industry can be.

AzAHEC Spotlight on Diversity

Diversity and AzAHEC's Pre-Collegiate (K-12) Health Career Preparation Pipeline Programs

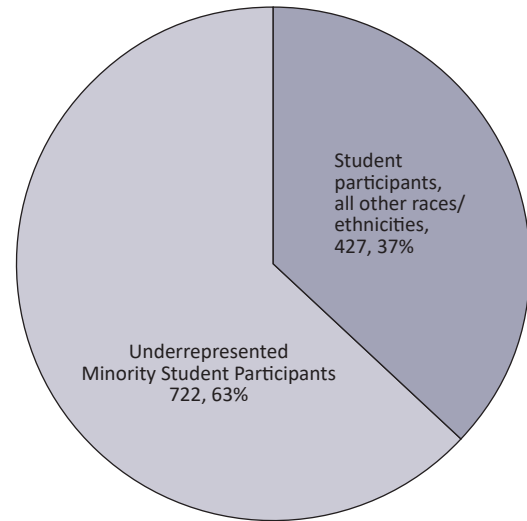
Different racial, ethnic, and socioeconomic groups experience inequalities in health at a disproportionate rate. The residential background of Arizona is synonymous with diversity. Improving health disparities hinges upon improving the diversity of Arizona's health workforce. Our AzAHEC regional centers are on the frontline of improving the diversity of those interested in pursuing health careers. During 2017-2018, nearly 7,030 k-16 students participated in health career preparation programs and 57 clubs facilitated by our regional centers. Using high school career clubs as a community based proxy, 60% of health career preparation participants are from underrepresented ethnic/racial groups, thus reflecting the diversity of Arizona (see highlighted summary figures below). In the reports provided by each regional center, brief synopses describe the nature of these programs.

A selection of Health Career (K-16) Preparation Programs throughout the five AZAHEC regional centers follows: Many clubs and community events have occurred at multiple sites/dates throughout the year where noted at a selection of several follow:

- ▶ BLAISER (Border Latino & American Indian Summer Exposure to Research)¹
- ▶ Community health education and career fairs (held 12 times throughout AZ)
- ▶ Community Projects (held 8 times throughout AZ)
- ▶ Future Health Leaders (at 17 sites)
- ▶ Girls on the Run (at 24 sites)
- ▶ HOSA – Future Health Professionals
- ▶ HOSA – AZ State Leadership Conference
- ▶ Job Shadowing Globe HS
- ▶ MedStart²
- ▶ Native Health Professions Day
- ▶ Summer Indigenous Pride Health Workers
- ▶ Summer Scrubs Nursing Camps (at 3 sites)
- ▶ Youth Leaders RISE

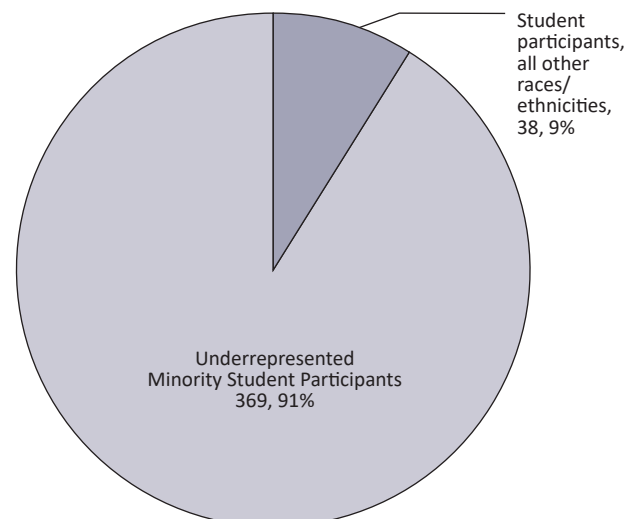
Diversity of Students in Health Career Clubs Throughout Arizona

Total Clubs = 57; Total Students = 1,149



Diversity of Students in Health Career Clubs Arizona-Mexico Border Region

Total Clubs = 10; Total Students = 407



¹ See BLAISER section for full report

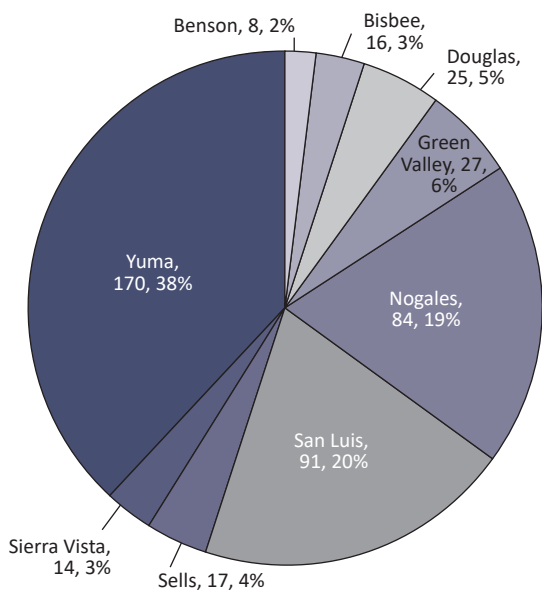
² See MedStart section for full report

AzAHEC Spotlight on the Border

Health Professions Trainee Field Experiences in the U.S.-Mexico Border Region, FY 2018

Border health is complex—an intersection of local and international issues play a factor in high health disparities among border populations. The UA’s commitment to improving health at the border is long-standing, and for decades, two of our AzAHEC regional centers—SEAHEC and WAHEC—have supported extensive health education training programs, health promotion programs, and improved access to care for border residents. Health professions trainee education in border settings is important to assure a robust pipeline of health-care providers for the future. The following section highlights the FY 2019 health professions field experiences in Arizona communities less than 60 miles of the U.S.-Mexico border.

Health Professions Field Experiences in Arizona Communities less than 60 Miles of the U.S.-Mexico Border, N = 452



County	Community
Cochise	Benson
	Bisbee
	Douglas
	Sierra Vista
Pima	Green Valley
	Sells
Santa Cruz	Nogales
Yuma	San Luis
	Yuma

Field experiences were reported by the RHPPs at the UA, ASU and NAU; the UA College of Medicine at South Campus family medicine and internal medicine rural programs; the UA Zuckerman College of Public Health Phoenix program and the AzAHEC regional centers.

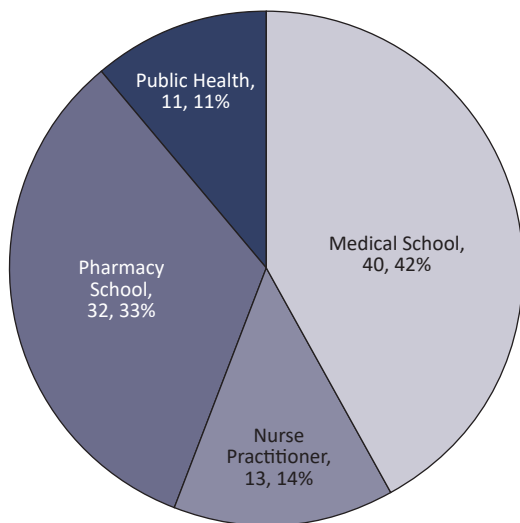
Health Professions Field Experiences and Contact Hours by Discipline in Arizona Communities within 60 Miles of the U.S.-Mexico Border

Academic Discipline/Program	Community	# Field Experiences	Contact Hours	Total Field Experiences	Total Contact Hours
Dentistry and Dental Hygiene	Nogales	1	160	1	160
	Medical Residency	Douglas	5	600	28
	Green Valley	14	672		
	Nogales	4	640		
	San Luis	5	80		
Medical School	Bisbee	3	800	72	13,664
	Douglas	15	2,560		
	Green Valley	3	900		
	Nogales	19	2,224		
	San Luis	1	40		
	Sells	7	1,760		
	Sierra Vista	3	450		
	Yuma	21	4,930		
	Nurse Practitioner	Benson	4		
Bisbee		2	234		
Douglas		5	781		
Green Valley		10	1,756		
San Luis		9	1,314		
Sierra Vista		4	1,168		
Yuma		4	539		
Nursing or Medical Assistant		San Luis	43	5,048	153
	Yuma	110	8,635		
Other Allied Health	San Luis	17	170	23	230
	Yuma	6	60		
Pharmacy School	Benson	4	720	43	7,734
	Nogales	9	934		
	San Luis	1	240		
	Sells	10	2160		
	Sierra Vista	6	1,120		
	Yuma	13	2,560		
Pharmacy Technician	Yuma	8	320	8	320
Physician Assistant	Nogales	11	2,400	29	5,260
	San Luis	11	1760		
	Sierra Vista	1	160		
	Yuma	6	940		
	Public Health	Benson	11		
	Nogales	26	1,262		
	Yuma	1	100		
Registered Nurse, Nurse Anesthetist, or Nurse Midwife	Nogales	2	60	4	590
	San Luis	1	160		
	Yuma	1	370		
Social Work and Behavioral Health	San Luis	2	580	2	580
Undergraduate Student	Nogales	12	274	13	469
	San Luis	1	195		
GRAND TOTAL				452	52,706

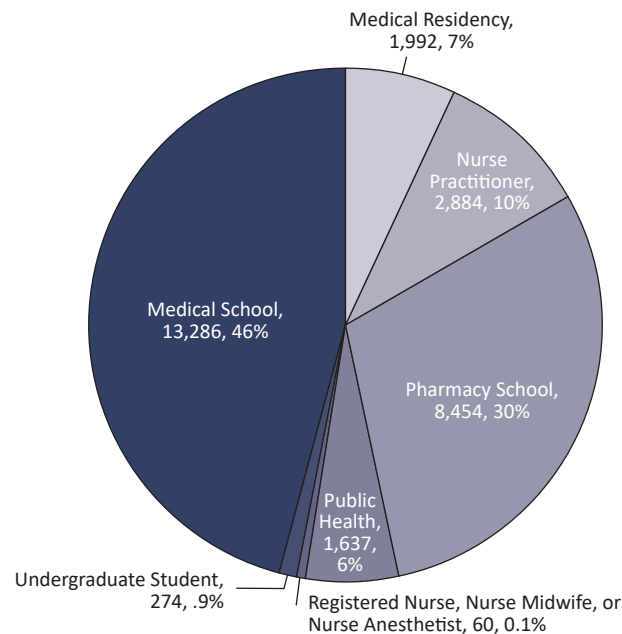
**UA Health Professions Field Experiences in Arizona Communities
within 60 Miles of the U.S.-Mexico Border**

County	City	Academic Discipline/Program	# Field Experiences	Contact Hours	Total Field Experiences	Total Contact Hours
Cochise	Benson	Nurse Practitioner	4	375	57	7,835
		Pharmacy School	4	720		
		Public Health	11	495		
	Bisbee	Medical School	3	800		
		Nurse Practitioner	2	234		
	Douglas	Medical Residency	5	600		
		Medical School	15	2,560		
		Nurse Practitioner	3	331		
Sierra Vista	Medical School	4	600			
	Pharmacy School	6	1,120			
Pima	Green Valley	Medical Residency	14	672	40	6,393
		Medical School	3	900		
		Nurse Practitioner	6	901		
	Sells	Medical School	7	1,760		
		Pharmacy School	10	2,160		
Santa Cruz	Nogales	Medical Residency	4	640	66	5,516
		Medical School	12	1,846		
		Pharmacy School	12	1,654		
		Public Health	24	1,042		
		Registered Nurse, Nurse Midwife, or Nurse Anesthetist	2	60		
		Undergraduate Student	12	274		
Yuma	San Luis	Medical Residency	5	80	49	8,843
		Medical School	1	40		
		Nurse Practitioner	4	504		
		Pharmacy School	1	240		
	Yuma	Medical School	20	4,780		
		Nurse Practitioner	4	539		
		Pharmacy School	13	2,560		
		Public Health	1	100		
TOTAL					212	28,587

UA Health Professions Field Experiences by Discipline in Arizona Communities within 60 Miles of the U.S.-Mexico Border, N = 96



UA Health Professions Field Experience Contact Hours by Discipline in Arizona Communities within 60 Miles of the U.S.-Mexico Border, Total = 28,587 hours



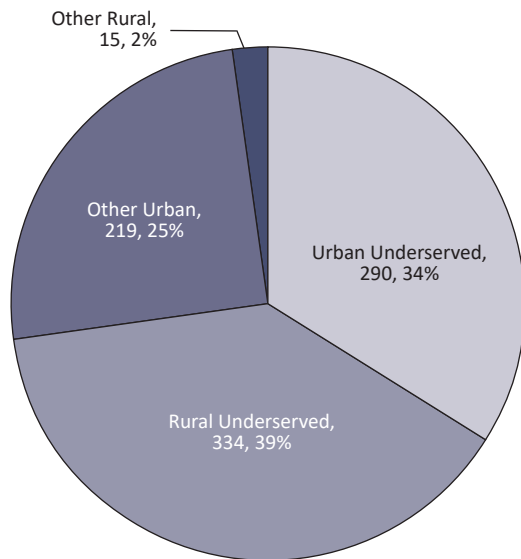
AzAHEC Spotlight on Community-Based Training

Field Experience Sites Training UA Students and Residents

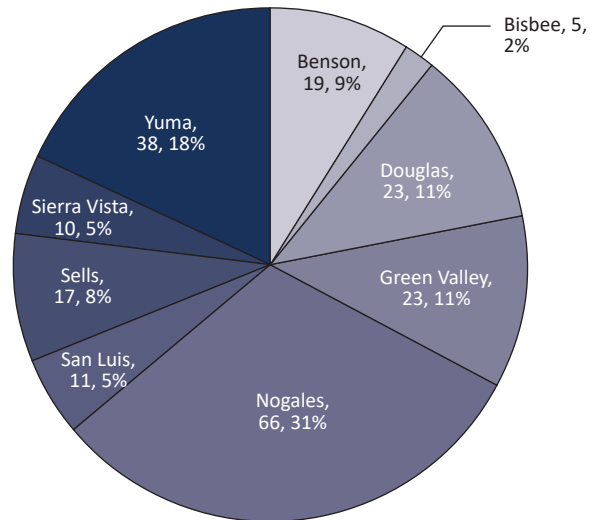
The training of our students and residents in rural and urban medically-underserved communities is made possible by the generosity and volunteered time of health-care providers throughout the state. AzAHEC and its supported programs are deeply grateful for this dedicated network of preceptors who are integral partners in preparing students and residents to practice culturally-competent, patient-centered, team-based care.

The following charts and table highlight the training and site types of students from UA RHPP colleges and residents from the UA College of Medicine at South Campus family and internal medicine program during 2017-2018. In total, students and residents trained at 204 community-based sites throughout the state. Notably, 39% of field experiences occurred in rural underserved communities and 24% within 60 miles of the U.S.-Mexico border.

UA Student and Resident Field Experiences by Site Setting, FY 2017-2018
N = 858



UA Student and Resident Field Experiences in the U.S.-Mexico Border Region, FY 2017-2018
N = 212



Analysis uses the rural definition according to ARS § 15-1754. Underserved characterization is based on formal medically underserved community designations by the Arizona state or federal government. Percentages may not sum to 100 due to rounding.

UA Student and Resident Field Experiences by Unique Site Types for Underserved Practice, FY 2017-2018

Description	# Training Sites	# Field Experiences	Total Training Hours
Critical Access Hospitals	6	24	3,544
Federally Qualified Health Centers (FQHCs) and Look-Alikes	15	77	12,822
Indian Health Service (IHS) and tribal-affiliated sites ¹	13	88	15,568
Rural Health Clinics	4	8	1,636

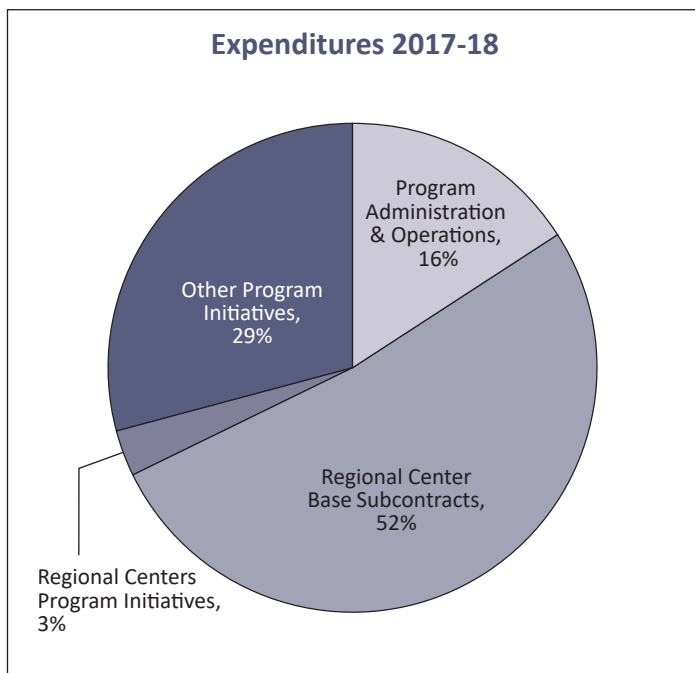
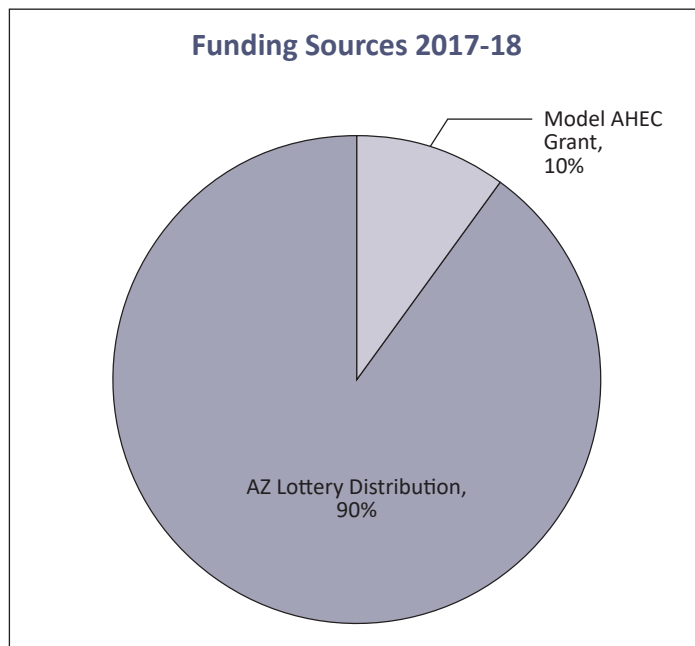
¹IHS and tribal-affiliated sites that are FQHCs or critical access hospitals are included in both applicable totals.

Financial Review: Fiscal Year 2017-18

The Arizona AHEC Program (AzaHEC) receives funding from state and federal sources. Federal funding was provided by the U.S. Department of Health and Human Services, Health Resources Services Administration (HRSA), Bureau of Health Professions through a Model AHEC grant. The Model AHEC grant requires matching non-federal funds. Funding from the Arizona State Lottery is allocated to the Arizona AHEC Program (as per ARS § 5-572C) through the Arizona Board of Regents (ABOR).

Expenditures of the Arizona AHEC Program during fiscal year 2017-18 included Program Administration & Operations, Regional AHEC Centers – Base Subcontracts, Regional AHEC Centers – Program Initiatives, and Other Program Initiatives.

The AHEC regional centers receive both federal and state funding allocations via annual subcontracts administered through the AzaHEC program office. Additional state lottery funding was issued to the regional centers during FY 2017-18 to support program initiatives other than the annual base subcontracts. AzaHEC also provides support for Other Program Initiatives, such as the Rural Health Professions Program (RHPP).



AzaHEC Employment Data 2017-18

Arizona AHEC Programs employ 110 people statewide, operating as important economic forces in their communities.

Item / Initiative	FTE's	"Person Count"
AzaHEC Program Office	8.12	13
EAHEC	2.70	4
GVAHEC	6.10	9
NAHEC	5.95	8
SEAHEC	4.87	5
WAHEC	6.30	7
RHPP COM-PHX	0.33	2
RHPP COM-TUS	0.50	2
RHPP CON	0.37	2
RHPP COPH	0.69	11
RHPP COP	0.30	1
RHPP ASU	0.20	2
RHPP NAU	0.16	2
North Country Residency Program	1.50	2
South Campus Primary Care Residencies	0.23	3
BLAISER Program	0.80	2
Med-Start Program	0.95	13
AzaHEC Grants Programs	0.69	21
North Country Research Program	1.00	1
North County Outreach Program	1.00	1
Establishing an Arizona Health Workforce Data System	1.25	2
TOTAL	44.01	113.00

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Prevention Education
UA Health Sciences

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Hospice of the Valley

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Yuma Regional Medical Center

Amanda Klein

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El Rio Community Health Center

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Psychiatric & Mental Health Nurse
Practitioner

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and Consumer Sciences
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UA Health Sciences

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Clinical Professor of Nursing

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UA College of Nursing

Marion Slack

Professor, Pharmacy Practice and Science
UA College of Pharmacy

ARIZONA AHEC Program Regional Centers 2017-18

Eastern Arizona AHEC (EAHEC)

SERVICE REGION: Gila, Graham, Greenlee
Counties and portions of eastern and
southern Pinal County
5880 S. Hospital Drive, Suite 115
Globe, AZ 85501-9449
(Mailing) PO Box 572 ZIP: 85502
928-402-8054

Greater Valley AHEC (GVAHEC)

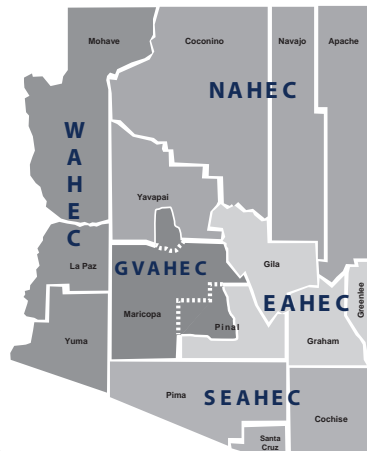
SERVICE REGION: Maricopa County and
portions of west-central Pinal and
south-central Yavapai Counties
c/o Empowerment Systems, Inc.
2066 West Apache Trail, Suite 116
Apache Junction, AZ 85120-3733
480-288-8260

Northern Arizona AHEC (NAHEC)

SERVICE REGION: Apache, Coconino, Navajo
Counties and eastern portions of Yavapai County
c/o North Country HealthCare
2920 North Fourth Street
Flagstaff, AZ 86004-1816
(Mailing) PO Box 3630, ZIP: 86003
928-522-9860

Southeast Arizona AHEC (SEAHEC)

SERVICE REGION: Cochise, Pima,
Santa Cruz Counties
1171 West Target Range Road
Nogales, AZ 85621-2415
520-287-4722



Western Arizona AHEC (WAHEC)

SERVICE REGION: La Paz, Mohave,
Yuma Counties
Regional Center for Border
Health, Inc.
214 West Main Street
Somerton, AZ 85350-0617
PO Box 617 Somerton, 85350
928-276-3414

Contact Us!



The Arizona AHEC Program is administered through the University of Arizona and is responsible to the Senior Vice President for Health Sciences. The University of Arizona Health Sciences includes the UA College of Medicine – Tucson, UA College of Medicine – Phoenix, UA College of Nursing, UA College of Pharmacy, and the UA Mel and Enid Zuckerman College of Public Health.

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